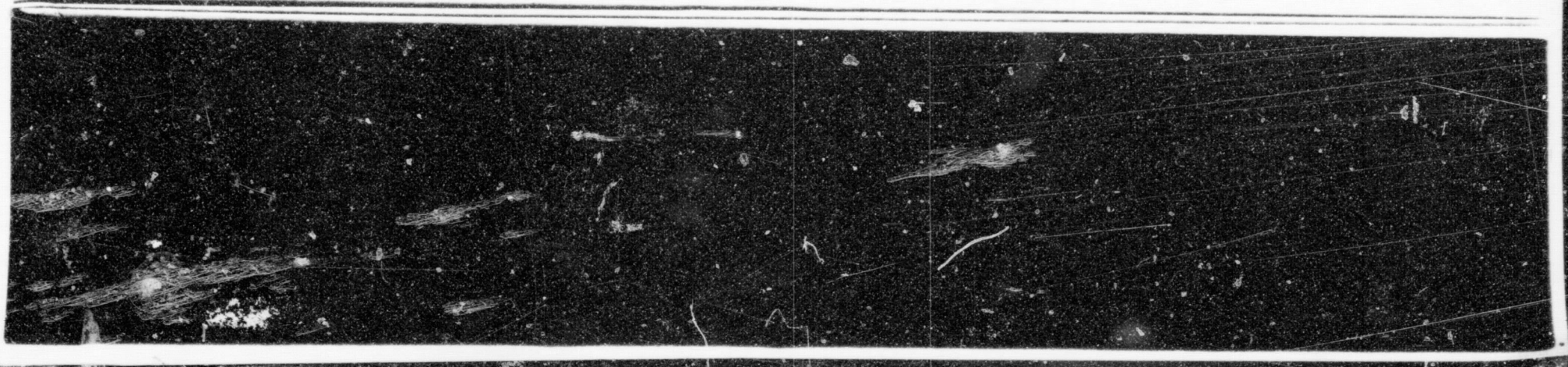
Finance Docket No. 32760, VOLUME 6, PART 6

27



Before the

INTERSTATE COMMERCE COMMISSION

Finance Docket No. 32760

UNION PACIFIC CORPORATION, UNION PACIFIC RAILROAD COMPANY AND MISSOURI PACIFIC RAILROAD COMPANY
— CONTROL AND MERGER —
SOUTHERN PACIFIC RAIL CORPORATION, SOUTHERN PACIFIC TRANSPORTATION COMPANY, ST. LOUIS SOUTHWESTERN RAILWAY COMPANY, SPCSL CORP. AND THE DENVER AND RIO GRANDE WESTERN RAILROAD COMPANY

RAILROAD MERGER APPLICATION

VOLUME 6, PART 6

ENVIRONMENTAL REPORT (EXHIBIT 4) -
APPENDIX

CANNON Y. HARVEY
LOUIS P. WARCHOT
CAROL A. HARRIS
Southern Pacific Transportation Company
One Market Plaza
San Francisco, California 94105
(415) 541-1000

PAUL A. CUNNINGHAM
RICHARD B. HERZOG
JAMES M. GUINIVAN
Harkins Cunningham
1300 Nineteenth Street, N.W.
Washington, D.C. 20036
(202) 973-7600

Attorneys for Southern Pacific Rail Corporation, Southern Pacific Transportation Company, St. Louis Southwestern Railway Company, SPCSL Corp. and The Denver and Rio Grande Western Railroad Company

CARL W. VON BERNUTH
RICHARD J. RESSLER
Union Pacific Corporation
Martin Tower
Eighth and Eaton Avenues
Bethlehem, Pennsylvania 18018
(610) 861-3290

JAMES V. DOLAN
PAUL A. CONLEY, JR.
THOMAS E. GREENLAND
LOUISE A. RINN
Union Pacific Railroad Company
Missouri Pacific Railroad Company
1416 Dodge Street
Omaha, Nebraska 68179
(402) 271-5000

ARVID E. ROACH II
J. MICHAEL HEMMER
MICHAEL L. ROSENTHAL
Covington & Burling
1201 Pennsylvania Avenue, N.W.
P.O. Box 7566
Washington, D.C. 20044-7566
(202) 662-5388

Attorneys for Union Pacific Corporation, Union Pacific Railroad Company and Missouri Pacific Railroad Company

November 30, 1995

292

California Environmental Protection Agency

State of California
Pete Wilson, Governor

OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT

October 16, 1995

Dames & Moore
Julie Donsky, Environmental Scientist
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

Gerald Johnston of the California Protection Agency forwarded a copy of your letter of September 22, 1995, concerning a Public Records Act request on two sections of Union Pacific Rail Line, Melrose to Magnolia and Whitter Junction to Colima Junction, and one section of Southern Pacific Rail Line, Alturas to Wendel, in California. The Office of Environmental Health Hazard Assessment has not been involved in any activities concerning these track sections and, therefore, has no documents, correspondence, memoranda, or reports on the subjects listed in your letter.

If you have any questions, please call me at (916) 324-2829.

Sincerely,

David M. Siegel, Ph.D., D.A.B.T, Chief
Hazardous Waste Toxicology Section

cc: William F. Soo Hoo
Chief Counsel

601 North 7th Street, MS-241 • P.O. Box 942732 • Sacramento, CA 94234-7320 • (916) 324-7572

ADMINISTRATION SERVICES BRANCH

FILE ROOM

TELEFAX TRANSMITTAL FORM

STATE OF CALIFORNIA
ENVIRONMENTAL PROTECTION AGENCY
DEPARTMENT OF TOXIC SUBSTANCES CONTROL
REGION 4
245 WEST BROADWAY, SUITE 350
LONG BEACH, CA 90802

(310) 590-4868

DATE: 10/19/95 NO. OF PAGES (INCLUDE COVER) 2

TO: Julie Donsky CONTACT NO.: (__) _____

FROM: JILL JENSEN CONTACT NO.: (310) 590-4980

SUBJECT: Written Request dated 9/22/95

C O M M E N T S

According to our records we have no files for the attached request

_____ URGENT/HAND CARRY _____ PER YOUR REQUEST

_____ CONFIDENTIAL _____ PLEASE COMMENT

_____ INFORMATION _____ ORIGINAL WILL FOLLOW
WILL NOT FOLLOW

0381

TELEFAX NUMBER: (310) 590-4933 OR CALNET (8) 635-4933
CONFIRMATION : (310) 590-4980 OR CALNET (8) 635-4980

DAMES & MOORE

ONE CONTINENTAL TOWERS, 1701 GOLF ROAD, SUITE 1000, ROLLING MEADOWS, ILLINOIS 60008
(708) 228-0707 FAX: (708) 228-1115

September 22, 1995

Environmental Protection Agency
555 Capitol Mall
Sacramento, CA 95814

NEO

Dames & Moore is preparing the Environmental Report for the application for merger of the Union Pacific and Southern Pacific Railroads. The attached list shows the merger related abandonment sites (and construction sites if information is available) currently identified within your state. In some states there also will be rail segments that will be affected by the proposed merger. We will advise you if and when they are identified in your state.

To prepare our Environmental Report, we are requesting that you inform us of any concerns you have and provide information regarding:

- Protected species information (state, federal) within 5 miles of each site;
- Listing of critical habitats within 5 miles of each site (it would be very helpful if you would mark the locations of the T&E species and critical habitats on the attached topographic maps);
- Locations of parks and refuges in proximity to the proposed projects;
- Any other information you would like to provide regarding environmental matters within your jurisdiction; and
- Citations to any permitting/approval authority your agency believes it may have over the project(s) we discussed.

We would appreciate receiving the requested information at your earliest convenience. We would further appreciate it if the information could be supplied in writing or orally to the undersigned at the address and phone/fax numbers on this letterhead. The railroads will be filing our Environmental Report with their application to the Interstate Commerce Commission ("ICC") on or before December, and thus your prompt reply will ensure that our report, which the ICC will consider in preparing its own environmental assessment of the above-described project, includes consideration of your views.

We very much appreciate your assistance.

Very truly yours,

DAMES & MOORE, INC.

Julie Dorsky

Julie Dorsky
Environmental Scientist

California Environmental Protection Agency
James M. Strock, *Secretary for Environmental Protection*

State of California
Pete Wilson, *Governor*

DEPARTMENT OF PESTICIDE REGULATION
James W. Wells, *Director*
1020 N Street, Room 100
Sacramento California 95814

October 26, 1995

Ms. Julie Donsky
Dames & Moore
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

Re: Your Letter of 9/22/95; Public Records Act Request

Dear Ms. Donsky:

I am in receipt of your requests for documents under the California Public Records Act (Government Code §6250, et. seq.), which have been forwarded to me from our parent agency -- the California Environmental Protection Agency (Cal-EPA). All requests for public records made to Cal-EPA are forwarded to each of the individual Departments for review. Because of this, many of the requests we receive are not applicable to any documents which we maintain.

The information you have requested does not appear directed toward any records that may be maintained by the Department of Pesticide Regulation, as we do not compile records relating to any specific "sites."

If you are requesting any documents which you believe may be maintained by this Department, please specify the type of document so that we may process your request.

If I do not receive a response to this letter by November 21, 1995 will assume your request does not pertain to any records involving pesticides.

If you have any questions, please feel free to contact me.

Sincerely,

William J. Lenkeit

0383

William J. Lenkeit
Staff Counsel (916) 324-2666

California Environmental Protection Agency
James M. Strock, *Secretary for Environmental Protection*

State of California
Pete Wilson, *Governor*

DEPARTMENT OF PESTICIDE REGULATION
James W. Wells, *Director*
1020 N Street, Room 100
Sacramento California 95814

October 26, 1995

Ms. Julie Donsky
Dames & Moore
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

Re: Your Letter of 9/26/95; Public Records Act Request

Dear Ms. Donsky:

I am in receipt of your requests for documents under the California Public Records Act (Government Code §6250, et. seq.), which have been forwarded to me from our parent agency -- the California Environmental Protection Agency (Cal-EPA). All requests for public records made to Cal-EPA are forwarded to each of the individual Departments for review. Because of this, many of the requests we receive are not applicable to any documents which we maintain.

The information you have requested does not appear directed toward any records that may be maintained by the Department of Pesticide Regulation, as we do not compile records relating to any specific "sites."

If you are requesting any documents which you believe may be maintained by this Department, please specify the type of document so that we may process your request.

If I do not receive a response to this letter by November 21, 1995 will assume your request does not pertain to any records involving pesticides.

If you have any questions, please feel free to contact me.

Sincerely,

William J. Lenkeit

0384

William J. Lenkeit
Staff Counsel (916) 324-2666

Board of Supervisors

County of Lassen

District 1
CLAUD R. NEELY
District 2
JIM CHAPMAN
District 3
JEAN P. LOUBET
District 4
GARY M. LEMKE
District 5
LYLE L. LOUGH

WILLIAM D. BIXBY, Administrative Officer
Lassen County Administration Building
707 Nevada Street
Susanville, CA 96130

(916) 251-8333
FAX: (916) 257-4898

MEMORANDUM

Date: October 2, 1995
(#951002A.WDB)

From: WILLIAM D. BIXBY, County Administrative Officer

To: BUREAU OF LAND MANAGEMENT
U.S. FOREST SERVICE
CALIFORNIA DEPARTMENT OF FORESTRY AND
FIRE PROTECTION
CALIFORNIA DEPARTMENT OF FISH AND GAME

Subject: Environmental Report for Application for Merger of Union Pacific and Southern Pacific Railroads.

The enclosed correspondence may be better addressed in part by your agency.

WDB:vel

cc: Board of Supervisors w/encl
Community Development Department w/encl
Julie Donsky, Dames & Moore

enclosure

San Bernardino
County Planning
Dept.

SAN BERNARDINO COUNTY
PLANNING DEPARTMENT

385 North Arrowhead
San Brenardino, CA 92415-0182

FAX

Date: 10/12/95

Number of pages including cover sheet: 1

To: JULIE DONSKY
Dames & Moore

Phone:

Fax phone: 708-228-1115

CC:

From: RANDY SCOTT

Phone: X 4146

Fax phone: (909) 387-3223

REMARKS: ☐ Urgent ☐ For your review ☐ Reply ASAP ☐ Please comment

RE: Your request for information regarding environmental effects of railroad merger and railline improvements.

Suggest you contact the California Natural Diversity Data Base for species and habitat information as well as Cal. Fish & Game and US Fish & Wildlife Service - Carlsbad Office.

Suggest you also use your own local company offices for names, phone #, addresses etc. of these and other agencies.

Two railline construction sites are within unincorporated San Bernardino County - Cajon Creek & St. Hwy 138 (your name: Summit, CA) and Devore (your name: Kenbrook, CA).

The description of improvements is too vague to provide any meaningful input at this time.

Increased train traffic will contribute to vehicle traffic delays, increased queing and increased vehiele emissions and air qualtiy impacts.

0386

Modoc County
Board of Supervisors

October 31, 1995

Ms. Julie Donsky
Environmental Scientist
Dames & Moore
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, IL 60008

Dear Ms. Donsky:

This letter is in response to your request for information concerning the abandonment of the rail road line from Alturas to Wendall. In general, we feel that information regarding the location, but not necessarily mitigation of T&E species and critical habitats, will be best addressed by the responsible agencies. However, under Sections 40 C.F.R. 1502.16, 40 C.F.R. 1508.14, 40 C.F.R. 1508.3, 40 C.F.R. 1508.8, we feel that a decision to prepare an EIR must also include social, economic and cultural impact of this action. Based on these Sections, we are providing the following information:

1. The Alturas-Wendall line provides the shortest distance to markets south of the County Seat. Rerouting to the west would cost considerably more and negatively effect any industry that might utilize it.

2. The line provides an alternate route when the routes to the west are under maintenance repair or have suffered accidental damage. In addition, the line provides for scheduling flexibility.

3. The City of Lakeview utilizes the line to ship lumber to external markets and biomass to a power plant in Wendall. The City of Lakeview purchased from Southern Pacific those portions of the line north of Alturas. You may wish to check the conditions of sale for provisions that would preclude abandonment.

4. The County of Modoc would suffer in our ability to attract business and industry.

5. In a rapidly changing world, it is difficult to estimate changes in transportation needs. This line provides the only alternative transportation of goods from the rural area to urban areas.

6. The rail line played a large role in the development, customs and culture of the County of Modoc.

7. Cumulative economic impacts should also be considered. The assumptions for analyzes need to be held constant to reflect impacts to the county.

8. Given the proximity of the wildlife refuges and sensitive habitats throughout the county and the economics associated with the construction of a new line, a decision to remove the lines will most likely represent a irreversible commitment. We feel this is a short-term benefit to the determent of long-term goals.

9. Please be aware that under the County Land Use Ordinances any mitigations that involve the transfers or long-term lease of property to State or Federal agencies require county participation throughout the mitigation, negotiation and transfer process.

Contact and notices may be addressed to the Modoc County Planning Department at 202 W. 4th Street, Alturas, CA 96101. Thank you for allowing us the opportunity to participate in the discussion. We look forward to working with you in the future.

Sincerely,

RON McINTYRE
Chairman
Modoc County Board of Supervisors

RM:cm

Enclosures

ECONOMIC DEVELOPMENT

BACKGROUND

As an isolated rural community, Modoc County is facing a lack of job and industrial growth. Efforts to deal with the problems of economic development have not so far been successful.

The unemployment rate for the County is 13.4% compared to state and national averages of less than 9%. Other indicators of low employment are an increase of welfare rolls over the last three years disproportionate to the increase in the population. Figures released in April of 1984 by the Modoc County Director of Social Services show that 23% of the population is receiving public assistance of some kind. The number of government jobs decreased between 1980 and 1982 from 36% of the total employment to 18%. During the last two years five ranches have closed and the lumber mill and bank will in Cedarville has shut down. It is not uncommon for the weekly newspaper to show no ads in the help wanted section.

Traditionally, Modoc County has depended on logging, ranching, and government to support its economy. All three of these pursuits are suffering from negative economic factors: logging is affected by decreased demand, ranching by beef prices 20 cents per pound below production cost, and government by budget cutbacks and subsequent manpower reductions. In the last five years, one of the two remaining banks in the county have removed loan authority from local branches, reducing the number of loans available to local businesses. Most businesses are family owned. Other economic factors are isolation, high shipping costs, discontinued railway services, and limited bus service. Modoc County has 16.8% of its residents at or below the poverty level; only three counties show higher figures. The area also has the lowest median housing value ranking, 58th out of 58 counties.

Past efforts to help unemployed persons have been attempted through several programs. The training programs have been hampered by one overriding fact: there are no jobs to put people into at the end of their training. This situation will worsen over time without stimulation of the economy to create or retain jobs.

The location of future development in the County will have an effect on the fiscal benefits derived from growth. In general, the fiscal benefits are likely to be higher if growth is concentrated in or near already developed areas. This allows growth to take advantage of established patterns of service.

For example, for general fund services, the fiscal benefits for commercial or industrial development are usually greater than from other types of development. Motel development typically generates the largest fiscal benefits per square foot of development. Visitor-related development can be a valuable source of revenue growth for the County. Visitor development usually brings high revenues in relationship to the costs required to provide public services for visitors. The growth of commercial and industrial development in Modoc County will depend primarily on the market demand for various business activities and the attraction of Modoc County for visitors.

Almost every aspect of the General Plan will have some indirect relationship to the local economy. Increased or decreased regulations on land development will affect different revenues and expenditures by Modoc County. Any recommendations requiring action by a governmental agency will necessarily mean a shifting of scarce resources from one subject to another. In fact, the policies and actions in the General Plan could touch almost every aspect of the local economy.

However, the more direct relationships are most important. The General Plan will provide one vehicle out of many in the effort to improve the economic conditions in Modoc County. That could take the form of identifying development-oriented actions which might expand the employment base.

ISSUES

While many concerns surround economic development in Modoc County, five issues stand out as most relevant to the General Plan. The issues are job creation, tourism, property tax revenues, general economic growth, and the role of traditional resource-based industries. Certainly all of these issues are interrelated. However, for clarity of discussion, they are separately addressed here. The policies and action program provide a comprehensive, unified approach to dealing with all of the economic development issues.

The underlying, overwhelming economic development issue facing Modoc County is location. The County is quite isolated from the population centers of California, Oregon, and Nevada. Transportation is time consuming, limited, and expensive. Support industries or services are very limited. The labor pool is relatively small and unskilled. The weather is sometimes harsh and the cultural opportunities limited. Few basic natural resources exist close by. There are many small communities in other areas which offer a similar high quality natural environment, but are not so isolated and, therefore, compete much more strongly for the kind of industrial growth which is sought in Modoc County.

For all of these reasons, attracting basic industry or tourism to Modoc County will be difficult. That is not to say, however, that the County cannot attract new industry or tourism. There are a number of strong qualities in Modoc County which establish a reasonable potential for economic development. But because of the obstacles, the County must simply work harder to overcome them and emphasize the positive. The chief determinant of the success or failure of the economic development efforts will depend on the individuals and groups involved in achieving economic development. The greater the level of individual activity and effort, the more likely some success will occur. The policies and action program of this General Plan are intended to support and enhance the many other efforts to achieve positive economic development in Modoc County.

Job Creation

The basis of any economic development effort is job creation. Increased unemployment not only means serious financial hardship for the unemployed and their families, it also means fewer dollars spent in local businesses. It is, therefore, in the interest of the entire community to promote job development in the area.

Modoc County is faced with several possibilities for job creation. The first is to attract new or to assist in the expansion of existing basic industries. The second possibility is to focus on increased tourism as a source of secondary jobs (as well as more actual dollars spent from outside the County). The third possibility lies in attracting service based industries.

The General Plan supports this two part job creation effort in several ways. First, the General Plan identifies appropriate areas for industrial land use and development. Keyed to the land use designations are also policies which guide decisions on industrial development beyond those areas initially identified. Secondly, the Plan identifies key physical obstacles to attracting industry and job growth. An approach to removing those obstacles is also outlined. Third, policies and actions are included which guide the interaction between the County's General Plan policies (and implementation program) and other job creation efforts by public and private sector organizations. Finally, a detailed approach to increasing tourism and tourist related jobs is outlined. The discussion of the tourism issues is found in the next subsection. The policies and action program are found at the end of this chapter.

Tourism

The natural environment and historic character of Modoc County are two of the County's strongest assets. Those assets are also the qualities which will, if anything does, affect increased tourism. However, because of the isolation and weather, tourism will not increase on its own momentum. Substantial efforts must be made in order to achieve a level of tourism that will make an economic difference to the county.

Several advantages exist to emphasizing tourism as a major source of economic development. A tourist-based economic development program will tend to minimize permanent population growth. That is an advantage given the strong feeling in the area that Modoc County is a great place to live because there are few people and that the people who do live there are close and friendly. Most of the small town qualities so many people value would be preserved and enhanced. Tourism will also not substantially increase demand on most public facilities such as sewer, water, streets, schools, police, and fire.

A second significant advantage to tourism is that if efforts to increase it are successful, the county should be a better place for permanent residents. Revitalization, beautification, and increased quality of retail services are all things which must occur for tourism to be successful. The results should make the County a better place to live.

Another important advantage of an enhanced tourism economic development program is that it would rely primarily on the efforts of people and businesses currently in the County. That means an improved standard of living and financial situation for present residents.

There are several aspects to enhancing the tourist base of the county's economy on which the General Plan will concentrate. Each of those areas is described here. The policies and action program at the end of

State and County Highways

The Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108) was used to develop L_{dn} contours for State and County highways within Modoc County. The FHWA Model is the analytical method presently favored by most state and local agencies, including Caltrans, for traffic noise prediction. The FHWA Model is based upon reference energy emission levels for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver and the acoustical characteristics of the site. The FHWA Model was developed to predict hourly L_{eq} values for free-flowing traffic conditions, and is generally considered to be accurate within plus or minus 1.5 dB. To predict L_{dn} values it is necessary to determine the hourly distribution of traffic for a typical 24-hour day and adjust the traffic volume input data to yield an equivalent hourly traffic volume.

Traffic data for existing and future conditions were obtained from Caltrans as summarized in Table II-3. The day/night distribution of traffic was assumed to be 87%/13%, based upon file data for rural highways. Future projections of annual daily traffic volumes are based upon yearly growth factors obtained from Caltrans. Using data from Table II-3 and the FHWA methodology, traffic noise levels as defined by L_{dn} were calculated for existing (1984) and projected future (2005) traffic volumes. Distances from the center of the roadway to L_{dn} contour values of 65 and 60 dB are summarized in Table II-4. Highway noise contours predicted for the year 2005 have been plotted on Figures II-4 to II-9 to illustrate traffic noise exposure in the larger communities of Modoc County. It should be noted that since calculations did not take into consideration shielding caused by local buildings or topographical features, the distances reported in Figure II-4 should be considered as worst-case estimates of noise exposure along roadways in the community.

Railroad Operations

Railroad operations in Modoc County are composed of through-freight and local switching operations on the Southern Pacific Transportation Company line (SPRR), which runs in the central portions of the County, and freight operations on the Burlington Northern Railroad on the west side. According to the SPRR Chief Dispatcher's office in Eugene, Oregon, the average number of SPRR operations from Alturas to Tulelake is one eastbound train and one westbound train per day, plus one "local." A low-speed "local" runs three times per week to Lakeview, Oregon, and two freights run per day between Likely and Alturas. Trains may run at anytime during the day or night. According to the Burlington Northern dispatcher, about one freight train passes through Modoc County per day, either north or southbound, usually during daytime hours. Railroad operations are not expected to change significantly within the foreseeable future. Table II-5 lists the predicted L_{dn} contour locations for present railroad operations in Modoc County. Railroad noise contours are plotted on Figures II-4 through II-9 to illustrate railroad noise exposure in the affected communities in Modoc County.

The Lakeview Branch is a spur line from Alturas, California, to Lakeview, Oregon, a distance of 55 miles. The train, consisting of from 2 to 20 freight cars, makes approximately six trips a week leaving Alturas in the afternoon and returning in the early evening.

The original roadbed was built by the Nevada-California-Oregon (NCO) Railway Company and was a narrow gauge system. It was completed in 1912.

The NCO started its railroad to accommodate the ranchers in northeastern California, northwestern Nevada and southern Oregon. The ranchers drove thousands of head of cattle and sheep to Gazelle, California, or Reno, Nevada, and shipped them to market. Passenger service was also a main source of revenue for NCO.

The SPRR desired a shorter route from the Pacific Northwest and bought the Nevada-California-Oregon holdings in 1926 and constructed the (now) main line between Alturas and Klamath Falls, Oregon. The SPRR provided passenger service until 1937. Freight is still transported over the route.

Burlington Northern Railroad serves the west side of the County on a north-south route, and a short east-west segment which intersects with the north-south route. The trains stop at Tionesta and Stronghold and are used for transportation of commodities. Passenger service is not provided.

The east/west spur connects Siskiyou County to lines which lead to national railroad transportation facilities. The spur is situated between the towns of Hambone in Siskiyou County and Lookout in Modoc County.

Truck freight lines transport commodities within the County and interregionally. They are capable of reaching areas not served by rail or air such as Surprise Valley. Trucks are used for shipping commodities (ie. potatoes, onion, alfalfa and livestock) from farm to market, and transporting supplies to the rural communities.

Passenger service is now only provided through Klamath Falls. Passenger trains arrive there twice a day. Connection is made to Alturas via the Greyhound bus service. Scheduling is such that bus connection to and from Alturas to Amtrak is quite inconvenient. Each way has an approximate six-hour differential in arrival and departure times, plus a two-hour bus ride.

AIRPORTS

There are seven public airports in the County (see Figure VIII-8). Alturas, Cedarville, Eagleville, Tulelake, Fort Bidwell, Adin and California Pines Airport. Charter service is available at Alturas Municipal Airport.

The majority of the property at Alturas Municipal Airport is owned by the City - Modoc County owns only those parcels acquired as a part of the recent improvements, and has a long-term lease on the remainder. A similar situation exists at Tulelake, with Modoc County leasing from the City of Tulelake. The Bureau of Land Management (BLM) owns the property at Eagleville and leases it to Modoc County. The four remaining airports operated by the County are under County ownership. The Cal Pines Airport is operated by the Cal Pines CSD, although it is public because it receives state monies.

agricultural aircraft. The remaining operations are primarily small single-engine propeller aircraft, with occasional twin-engine aircraft activity. The majority of operations take place on runway 11. Operations by agricultural aircraft usually take place from 5:00 a.m. to noon during the months of June-August, with up to 30 takeoffs reported for a typical busy day.

ISSUES AND OPPORTUNITIES

Streets and Highways

Planned housing developments with a high volume of traffic require maintenance and improvements of the private roads. Developers and private citizens would like the County to maintain the roads. Due to high costs of maintenance and reduced County budgets, the County refrains from adding the private roads to the County Road Inventory.

Modoc County has a high percentage of road miles as compared to a low percentage of population; therefore, cost of road miles is more per person than in more populated areas. Budgets frequently do not allow road maintenance to standards often desired by citizens.

The issue of substandard private roads becoming part of the County road system raises several concerns, including funding and public safety.

SPRR

In 1983, Burlington Northern proposed to abandon the east-west line from Hambone (Siskiyou County) to Lookout (Modoc County). McCloud River Railroad (MCRR) has opposed the abandonment because it would deny them access to the national railroad system. The proposed abandonment was denied.

Southern Pacific Railroad has proposed to discontinue service on the Lakeview Branch in Modoc County. That line extends from Lakeview, Oregon to Alturas, and is used to transport timber and agricultural commodities.

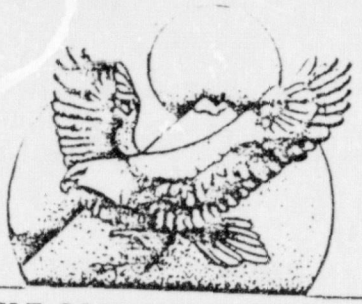
Aviation

If it were not for monetary constraints, a repaving project for Runway 3/21 at Alturas Municipal Airport would be planned, as well as replacement of base and pavement at Eagleville Airport. Also, the antiquated lighting system at Tulelake would be considered for replacement.

Goods Movement

Rail crossings on many of the roads in Modoc County require maintenance to ensure safe travel by motorists. Possible rail abandonments will affect the economy of towns dependent on that transportation. Trucks will be needed to transport the commodities, thus putting a heavier burden on the highway.

Engineering Department
(970) 328-8700
Fax: (970) 328-7185
TDD: (970) 328-8707



EAGLE COUNTY, COLORADO

October 18, 1995

Ms. Julie Donsky
Environmental Scientist
Dames & Moore, Inc.
1701 Golf Road, Suite 1000
Rolling Meadows, IL 60008

Dear Ms. Donsky:

Enclosed is a copy of the Wildlife Habitat map for Eagle County which is forwarded in repsonse to your letter of September 22, 1995 concerning the Environmental Report for the merger application of the Uniion Pacific and the Southern Pacific Railroads.

There are other maps which will be forwarded in digital format. Please work with Lloyd Powers in this office to coordinate the desired format.

Please be advised that the Eagle County Land Use Regulations will be applicable to any future use of the rail corridor should the abandonement be approved.

If you have any questions, please contact myself of Llyod Powers at (970) 328-8760.

Sincerely,

EAGLE COUNTY ENGINEERING DEPARTMENT

George Roussos
County Engineer

xc: Llyod Powers, Surveyor
Eagle County
chrono/file

PLANNING & ZONING DEPARTMENT

300 W. Ash Room 104
P.O. Box 5040
Salina, Kansas 67402-5040
913/826-6565
FAX: 913/826-6629

October 11, 1995

Julie Donsky
Environmental Scientist
Dames & Moore
One Contintental Towers
1701 Golf Rd., Suite 1000
Rolling Meadows, IL 60008

Re: Abandonment of MoPac Rail Line in Saline County

Dear Ms. Donsky:

This letter is sent in response to your request for information you requested for an Environmental Report on the application for merger of the UP and SP Railroads.

Saline County does not have species information or a listing of critical habitats within 5 miles of the site. There are no parks and refuges in proximity to the projects. Further, our agency does not have any permitting/approval authority over the project.

If you have not done so, I suggest that you also ask for review comments from the City of Gypsum and from the Kansas Department of Wildlife & Parks.

If you have any questions, please call me at (913)826-6565.

Sincerely,

David E Gurss

David E. Gurss
Planning & Zoning Director

Illinois Department of Conservation

LINCOLN TOWER PLAZA • 524 SOUTH SECOND STREET • SPRINGFIELD [illegible] • [illegible] • [illegible] •

Brent Manning, Director John W. Comerio, Deputy Director Bruce F. Clay, Assistant Director

October 12, 1995

Ms. Julie Donsky, Environmental Scientist
Dames & Moore
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

RE: Endangered and Threatened Species Consultation Process
Environmental Report - ICC Submittal
Union Pacific and Southern Pacific Railroads Merger
IDNR Project: #21189

Dear Ms. Donsky:

Thank you for sending the above referenced project to this office for review of the presence of endangered or threatened species, Illinois Nature Preserves, and/or Illinois Natural Area Inventory (INAI) sites. The Illinois Natural Heritage Database was examined and there are several known occurrences associated with portions of this railroad project.

<u>I. DeCamp to Edwardsville - Edwardsville to Madison</u>:

The first area of concern is classified as the Eagle Park Marsh INAI site. This Illinois listed natural area inventory site is depicted on the Granite City, Illinois quadrangle map and exists in portions of the following topographic map sections - T:3N, R:9W, S:31, also T:3N, R:10W, S:36 and last, T:2N, R:10W, S:1, immediately south/southeast of the town of Venice, Illinois in Madison County. Additionally, the Eagle Park Marsh INAI site is part of the Horseshoe Lake complex located approximately 500 to 1000 feet east of the railroad tracks under investigation. State listed avian species recorded within this INAI site include: yellow-headed blackbird (<u>Xanthocephalus xanthocephalus</u>), which is classified as State endangered; common moorhen (<u>Gallinula chloropus</u>), which is classified as State threatened; and the pied-billed grebe (<u>Podilymbus podiceps</u>), which is also classified as State threatened.

The second natural resource of concern is a confirmed record of the State listed threatened avian species commonly known as the common moorhen (<u>Gallinula chloropus</u>) within topographic map Section 11, Township 3 north, Range 9 west, immediately southwest of the town of Stallings, Illinois in Madison County. This occurrence is depicted on the Monks Mound quadrangle map and is located approximately 1000 feet south of the railroad tracks in question.

Please Note: As of July 1, 1995, this agency is a part of the newly formed Department of Natural Resources. To conserve natural resources and reduce waste, agencies affected by the merger are using their remaining inventory of stationery and printed envelopes. All correspondence should now be directed to: Illinois Department of Natural Resources, 524 S. Second St., Springfield, IL 62701-1787.

II. Barr to Girard:

The only recorded natural resource of concern currently within the Division's files is a confirmed record of the State listed threatened avian species commonly known as the loggerhead shrike (Lanius ludovicianus)within topographic map Sections 33 and 34, Townships 14 north and 15 north, Range 6 west, immediately north of Lick Creek in Sangamon County, Illinois. This occurrence is depicted on the Loami quadrangle map and is located approximately 1 mile west of the subject railroad tracks.

Because this is an information request, further consultation is not required at this time. However, as authorized by Section 11(a) of the Illinois Endangered Species Protection Act (Ill. Rev. Stat. 1989, ch. 8, par. 341), a proposed land-altering action shall not commence until the completion of the consultation process. This includes any form of construction, land management, or other activity authorized, funded, or performed by a State agency or local unit of government that will result in a change to the existing environmental conditions and/or may have a direct or indirect adverse impact on a listed species or its essential habitat or that otherwise jeopardizes the survival of that species. It is hoped that the environmental information contained in this letter will be used by the appropriate parties during any subsequent planning and construction phases. If construction efforts will be occurring in the specific regions described in this correspondence, it will be necessary to continue the consultation process so that an accurate assessment of potential biological impacts to the listed resources present can be made.

Please be aware that the Illinois Natural Heritage Database cannot provide a conclusive statement on the presence, absence, or condition of significant natural features in any part of Illinois. The reports only summarize the existing information regarding the natural features or locations in question known to the Division of Natural Heritage at the time of the request. The reports should never be regarded as final statements on the subject site being considered, nor should they be a substitute for field surveys required for environmental assessments.

If you have any questions or concerns about the above information, please do not hesitate to contact me at (217)785-5500. Thank you for your assistance in this matter.

Sincerely,

Joseph A. Kath
Project Manager
Endangered and Threatened Species Protection Program

KANSAS

STATE

HISTORICAL

SOCIETY

6425 S.W. 6th Avenue
Topeka, Kansas
66615-1099
PHONE# (913) 272-8681
FAX# (913) 272-8682
TTY# (913) 272-8683

KANSAS HISTORY CENTER

Administration
Center for Historical Research
Cultural Resources
Education / Outreach
Historic Sites
Kansas Museum of History
Library & Archives

HISTORIC SITES

Adair Cabin
Constitution Hall
Cottonwood Ranch
First Territorial Capitol
Fort Hays
Goodnow House
Grinter Place
Hollenberg Station
Kaw Mission
Marais des Cygnes Massacre
Mine Creek Battlefield
Native American Heritage Museum
Pawnee Indian Village
Pawnee Rock
Shawnee Mission

CULTURAL RESOURCES DIVISION
HISTORIC PRESERVATION OFFICE
(913) 272-8681 ext. 240

October 17, 1995

Ms. Julie Donsky
Dames & Moore
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, IL 60008

RE: Union Pacific Railroad Company Abandonments in Dickinson, Saline, Butler, and Harvey Counties

Dear Ms. Donsky:

The materials received September 27, 1995, regarding the above referenced project have been reviewed in accordance with the federal regulations for the protection of historic properties, 36 CFR Part 800.

The State Historic Preservation Officer does not have adequate information to comment on the proposed undertaking. Generally, our involvement in reviews of this nature is to make a determination as to whether or not the rail lines/properties involved are eligible for the National Register, and if so, to comment on what effects the proposed abandonment would have on the properties. We can not make that determination based on the information provided to us. Before we can comment on the project, the following information would have to be submitted: a) photographs (prints) of structures and bridges along the rail lines, b) historical information identifying the role of the individual rail lines and their dates of construction. As soon as we receive this information we will issue our final comment on the undertaking.

You may contact Desmond Anyanwu at (913) 272-8681 ext. 216 if you have any questions.

Sincerely yours,

Richard Pankratz
Deputy State Historic Preservation Officer

da.

0399

Johnson County, Kansas • Office of the County Clerk
Beverly L. Baker, County Clerk

October 30, 1995

Julie Donsky, Environmental Scientist
DAMES & MOORE, INC.
One Continental Towers
1701 Golf Road - Suite 1000
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

We do not find any property in Johnson County affected by the proposed merger of the Union Pacific and Southern Pacific Railroads on your listing dated October 23, 1995.

This information is being forwarded to E. H. Denton, our County Administrator.

Sincerely,

Beverly L. Baker

Beverly L. Baker
County Clerk

BLB:lh

0400

111 S. Cherry Street • Olathe, Kansas 66061-3469 • (913) 764-8484, EXT 5335 • FAX (913) 791-5111

State of Louisiana

Joe L. Herring
Secretary

Department of Wildlife and Fisheries
Post Office Box 98000
Baton Rouge, LA 70898-9000
(504) 765-2800

Edwin W. Edwards
Governor

November 2, 1995

Julie Donsky
Dames & Moore
1701 Golf Road, Suite 1000
Rolling Meadows, IL 60008

RE: Solicitation of Views on Impact on Sensitive Wildlife and/or Habitat for Union Pacific and Southern Pacific Aandonment Sites.

Dear Ms. Donsky:

Personnel of the Environmental Branch have reviewed the preliminary data for the captioned project. In reviewing our database, no rare, threatened, or endangered species or critical habitats were found within the area of the captioned project that lies in Louisiana. No state or federal parks, wildlife refuges, scenic streams, or wildlife management areas are known at the specified site within Louisiana's boundaries. To our knowledge, no wetlands will be adversley affected.

The Louisiana Natural Heritage Program has compiled data on rare, endangered, or otherwise significant plant and animal species, plant communities, and other natural features throughout the state of Louisiana. Heritage reports summarize the existing information known at the time of the request regarding the location in question. They should not be considered final statements on the biological elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. The Louisiana Natural Heritage Program requires that this office be acknowledged in all reports as the source of all data provided here.

Sincerely,

Lee Caubarreaux for
Office of Wildlife

LC:dkc

0401

RAY DEPUY
DISTRICT 1

GARY WINTERS
DISTRICT 2

HARVEY HALE
DISTRICT 3

TEXAS COUNTY
BOARD OF COMMISSIONERS

Box 197

GUYMON, OKLAHOMA 73942

405-338-3233

October 17, 1995

Dames & Moore
One Continental Towers
1701 Golf Road , Suite 1000
Rolling Meadows, Illinois 60008

Dear Sirs:

This letter is in response to your request for any concerns we may have as a result of the proposed merger of the Union Pacific and Southern Pacific Railroads.

We are very concerned about the permanent closing of several of the crossings in Texas County. These closings make it extremely difficult for our farmers and other Agricultural and Oil Field related services. It is very important that we be informed of these permanent closings and that we have open communication in regards to where and when these permanent closings will take place.

The Texas County Commissioners are also extremely concerned about the closing of a crossing for repair. This is because many times the crossing is closed for too long of a time or left in bad repair, which makes the crossing very rough and causes much wear and tear on trucks and farm machinery. We understand the need for closing to work on a crossing, but our concern is the length of time of the closing and poor maintenance of the crossing.

It is our desire to have a better working relationship with the Railroad Officials and to cooperate in every way possible. We believe this can be done through communication and consideration for the needs of the Railroad and Texas County..

We believe our concerns are reasonable and legitimate and we thank you for the opportunity to express these concerns.

Sincerely,

Ray Depuy

Ray Depuy
Texas County Commissioner

east texas council of governments

3800 STONE ROAD
KILGORE, TEXAS 75662 • 903/984-8641 • FAX 903/983-1440

SERVING A FOURTEEN-COUNTY REGION

October 24, 1995

Ms. Judy Young
T. C. Adams, State Single Point of Contact
Texas Office of State-Federal Relations
P. O. Box 13005
Austin, TX 78711

RE:SAI# TX-R-95-09-29-0002-50-06

Dear Ms. Young:

The East Texas Council of Governments (ETCOG) has reviewed the application for the merger of the Union Pacific and Southern Pacific Railroads as submitted to the Interstate Commerce Commission (ICC). This merger will result in the abandonment of the Missouri Pacific Rail Line located within Smith County. The line to be abandoned extends approximately eight miles between the Cities of Whitehouse and Troup.

After consulting with the City Managers of both of the affected communities, ETCOG has determined that there will be no adverse economic consequences from the proposed abandonment. ETCOG also encourages both county and city officials to contact the Interagency Abandoned Rail Corridor Committee (IARCC) in Austin to consider other public uses of the corridor that would be compatible with the goals and objectives of the ETCOG Land Resource Management Plan.

Sincerely,

Glynn J. Knight
Executive Director

GJK/MWS/bc

cc: Commissioner Derrell Cooper, Smith County
Mayor S. R. McCugh, City of Bullard
Tom Smyser, City Manager, City of Whitehouse
Jyl Moose, City Manager, City of Troup
Julie Donsky, Environmental Scientist, Dames & Moore, Inc.

Office of the Attorney General
State of Texas

October 3, 1995

DAN MORALES
ATTORNEY GENERAL

Ms. Julie Donsky
Environmental Scientist
Dames & Moore
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

I received your letter of September 26, 1995 requesting specific information for use in your preparation of an Environmental Report for the application for merger of the Union Pacific and Southern Pacific Railroads. The information you requested is not of the type that the Office of the Attorney General keeps in the ordinary course of business or can provide to you directly. Instead, you need to contact the specific regulatory agencies within the state of Texas that have jurisdiction over the matters that you have noted in your letter. In Texas, those agencies are the Parks and Wildlife Commission, Andrew Sansom, Executive Director, 4200 Smith School Road. Austin, Texas 78744 and the Natural Resources Conservation Commission, Dan Pearson. Executive Director, 12100 Park 35 Circle, P O. Box 13087, Austin, Texas 78711-3087.

Should you need any additional information from this office, after you contact the regulatory agencies in Texas, please do not hesitate to let me know.

Very truly yours,

Hal R. Ray, Jr.
Chief, Natural Resources Division

G:\NRD\DATA\JSH\DONSKY.DOC

512/463-2100 P.O. BOX 12548 AUSTIN, TEXAS 78711-2548

Office of the Attorney General
State of Texas

DAN MORALES
ATTORNEY GENERAL

September 27, 1995

Ms. Julie Donsky
Environmental Scientist
Dames & Moore
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

I received your letter of September 22, 1995 requesting specific information for use in your preparation of an Environmental Report for the application for merger of the Union Pacific and Southern Pacific Railroads. The information you requested is not of the type that the Office of the Attorney General keeps in the ordinary course of business or can provide to you directly. Instead, you need to contact the specific regulatory agencies within the state of Texas that have jurisdiction over the matters that you have noted in your letter. In Texas, those agencies are the Parks and Wildlife Commission, Andrew Sansom, Executive Director, 4200 Smith School Road, Austin, Texas 78744 and the Natural Resources Conservation Commission, Dan Pearson, Executive Director, 12100 Park 35 Circle, P.O. Box 13087, Austin, Texas 78711-3087.

Should you need any additional information from this office, after you contact the regulatory agencies in Texas, please do not hesitate to let me know.

Very truly yours,

Hal R. Ray, Jr.

Hal R. Ray, Jr.
Chief, Natural Resources Division

G:\NRD\DATA\JSH\DONSKY.DOC

512 463-2100 P.O. BOX 12548 AUSTIN, TEXAS 78711-2548

TEXAS REVIEW AND COMMENT SYSTEM
REVIEW NOTIFICATION

Applicant/Originating Agency: Dames & Moore
Contact Name and Phone: Ms. Juie Donsky (E. Scientist) / (708) 228-0707

Project Title: EA-MERGER OF UNION PACIFIC & SOUTHERN PACIFIC RLRD

Funding Agency: ICC SAI/EIS#: TX-R-95-09-29-0002-50-00

Date Received: September 25, 1995 Date Comments Due BPO: 11/06/95

REVIEW PARTICIPANTS

Texas Attorney General's Office
Texas Historical Commission
Texas Parks and Wildlife Department
Railroad Commission of Texas
Texas Natural Resource Conservation Commission
Brazos Valley Development Council
East Texas Council of Governments
Golden Crescent Regional Planning Commission
Houston-Galveston Area Council

Special Notes/Comments: Subject application was provided to reviewers listed above per receipt of this notification by SPOC. Please contact the applicant above directly if you need more information.

[] No Comment.

Review Agency Signature

Return Comments to: for D. C. Adams, State Single Point of Contact
Texas Office of State-Federal Relations
P.O. Box 13005
Austin, TX 78711
(512) 463-1771

Texas Attorney General's Office
Mr. Paul Elliott
Chief, Environmental Protection Div.
300 W. 15th Street, 10th Floor
Austin, Texas 78711

Texas Historical Commission
Dr. James Bruseth
TRACS Coordinator
1511 Colorado Street
Austin, Texas 78711

Texas Parks and Wildlife Department
Mr. Robert W. Spain, Chief
Habitat Assessment Branch
4200 Smith School Road
Austin, Texas 78744

Railroad Commission of Texas
Mr. Brian Schaible
Director, Office of Information Services
William B. Travis Building
Austin, Texas 78711

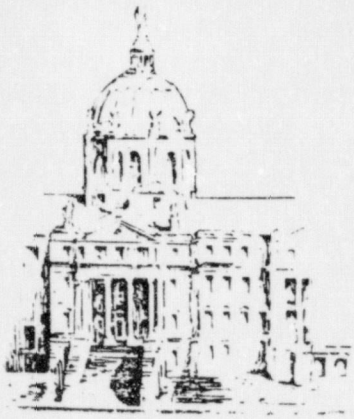
Texas Natural Resource Conservation Commission
Ms. Sidney Wheeler
Executive Director's Office
P. O. Box 13087
Austin, Texas 78711-3087

Brazos Valley Development Council
Mr. Tom Wilkinson, Jr.
Executive Director
P.O. Drawer 4128
Bryan, Texas 77805-4128

East Texas Council of Governments
Mr. Glynn J. Knight
Executive Director
3800 Stone Road
Kilgore, Texas 75662

Golden Crescent Regional Planning Commission
Mr. Patrick J. Kennedy
Executive Director
P.O. Box 2028
Victoria, Texas 77902

Houston-Galveston Area Council
Ms. Rowena Ballas
Admin. Asst., Programs
P.O. Box 22777
Houston, Texas 77227



McLennan County Courthouse

Jim Lewis

McLENNAN COUNTY JUDGE

P.O. Box 1728
Waco, Texas
76703-1728

817-757-5049
Fax No. 817-757-5196

October 27, 1995

Ms. Julie Donsky, Environmental Specialist
Dames & Moore
One Continental Towers, 1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

Re: Environmental Report; Application for Merger of the Union Pacific and Southern Pacific Railroads

Dear Ms. Donsky:

Thank you for your letter of October 23, 1995 regarding the above referenced environmental report. In connection with the proposed activities within McLennan County, we hereby request the following:

Information concerning the impact of the proposed "Bellmead Project" on the 100 year flood plain. (Flood Insurance Rate Map # 480457-000JB indicates that a portion of the project lies within Zone A3.)

You may direct your response to McLennan County Engineer, Steve Hendrick, at the following address: McLennan County Engineer's Office, P. O. Box 648, Waco, Texas 76703-0648.

Sincerely,

Jim Lewis

Jim Lewis
County Judge

JL/ls

cc: Steve Hendrick, County Engineer
Commissioner Fred Binner, Precinct 3

COUNTY COMMISSIONERS
R. Lee Allen
Jay Hardy
Royal K. Norman

BOX ELDER COUNTY
STATE OF UTAH

OFFICERS
Carma J. Secrist, County Auditor
LuAnn Adams, County Recorder/Clerk
Leon Jensen, County Sheriff
Jon J. Bunderson, County Attorney
Monte R. Munns, County Assessor/Treas.
Denton Beecher, County Surveyor
DeVere Payne, County Judge

October 3, 1995

Julie Donsky
Environmental Scientist
Dames & Moore
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

With regard to your request for response to the Union Pacific and Southern Pacific merger and the abandonment of the Little Mountain branch, we offer the following:

1. This branch crosses a County road known as 8700 South in the area of I-15. This crossing should be removed per County's approval.

2. We are unaware of any protected species.

3. Critical habitats within 5 miles would be upland birds, etc.

4. There is a State park in the area called South Willard Bay Marina.

We trust this will provide the information needed.

Respectfully,

R. Lee Allen, Chairman
Box Elder County Commission

RLA:lr

801-734-2031 801-257-5810
01 South Main Brigham City, Utah 84302

PERSONAL COMMUNICATIONS

ABANDONMENT PROJECTS

STATE

CALIFORNIA

Jenson, Bruce, Almeda Co. Planning Department, October 11, 1995. Personal communication regarding the Melrose to Magnolia abandonment site. It was noted that Almeda Co. has no comments on the proposed abandonment.

Kessler, Scott, Modoc County Planning Director, October 2, 1995. Personal communication regarding the Alturus to Wendel abandonment site. It was noted that the abandonment of this segment will adversely affect the economic base of the community because: (1) there is a full-service roundhouse in Alturus, (2) there would be a substantial loss of tax dollars to the area, and (3) this is the only rail line servicing the Lakeview Lumber Company in Lakeview, Oregon.

OREGON

Kelly, Mike, Dames & Moore, October 30, 1995. Personal communication regarding a record search. It was noted that a record search at Oregon SHPO was completed. One problem encountered was that there is no way to check for historic structures within a specific area because they are not mapped. The only way to know for sure is to physically check the areas of concern.

UTAH

Farous, Jim, State of Utah - Department of Environmental Quality of Weaver Co., October 17, 1995. Personal communication regarding the abondonment of the Little Mountain Branch rail segment. It was noted that there are several concerns regarding the closure of this segment, including: (1) the segment traverses numerous marshes which contain such habitat as falcons, and bald eagles, (2) the segment runs along a major waterway - the Willard Bay reservoir which would increase its load of sediment and therefore hurt animal life in that area, and (3) the segment runs next to salt evaporation ponds and the ballast material may contain slag that is lead.

ABANDONMENTS

PERSONAL COMMUNICATIONS

FEDERAL

Corrasa, Mary, U.S. Army Corps. of Engineers, November 3, 1995. Personal commumication regarding the Little Mountain Branch abandonment site. Everything was noted to look correct.

Parrington, Jackie, New Orleans District Corps. of Engineers, October 23, 1995. Personal communication regarding the Lake Charles-Iowa Junction abandonment site. It was noted that it is likely that a permit will be needed and the Corp. should and will be contacted prior to abandonments that they have jurisdiction over (including wetlands and navigable waters).

Mauney, Morris, Corp. of Engineers, Memphis, TN, October 10, 1995. Personal communication regarding the Wheatley-W. Memphis abandonment site. It was noted that the section which crosses the St. Francis Floodway contains the fat pocketbook pearly mussles (protamalus capax) which is an endangered federally listed species.
Personal communication regarding the Gurdon-Camden abandonment site. It was noted that in the Nevada/Oachita Counties there is the Poison Spring Wildlife Management Area (state area) which is located on the north end of the abandonment. Additionally, just south of the county border is the White Oak Lake State Park.

Harriman, Jim, BIA-EAO Environmental Coordinator, United States Department of the Interior, October 4, 1995. Personal communication regarding numerous abandonment sites. It was noted that the Bureau has no interests which will be impacted by the proposed abandonments.

SECTION A-3

RAIL SEGMENTS

SAMPLE LETTER TO AGENCIES

RAIL SEGMENTS

September 26, 1995

Mr. Mike Chiratti
Chief Projects Analyst
Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814

Dear Mr. Chiratti:

Dames & Moore is preparing the Environmental Report for the application for merger of the Union Pacific and Southern Pacific Railroads. The attached list and maps show merger rail segments, identified within your state, which may see an increase in rail activity (increase in the number of trains per day) due to the proposed merger. In some states there will also be construction which will occur as a result of the proposed merger. We will advise you if and when they are identified in your state.

To prepare our Environmental Report, we are requesting that you inform us of any concerns you have and provide information regarding:

- protected species information (State; Federal) within 5 miles of each site.
- listing of critical habitats within 5 miles of each site.
- locations of parks and refuges in proximity to the proposed projects.
- citations to any permitting/approval authority which you believe your state has over the actions identified.
- any other information you would like to provide regarding environmental matters or local concerns at these sites.

We would appreciate receiving the requested information at your earliest convenience. We would further appreciate it if the information could be supplied in writing or orally to the undersigned at the address and phone/fax numbers on this letterhead. The railroads will be filing our Environmental Report with their application to the Interstate Commerce Commission ("ICC") on or before December, and thus your prompt reply will ensure that our report, which the ICC will consider in preparing its own environmental assessment of the above-described project, includes consideration of your views.

We very much appreciate your assistance.

Very truly yours,
DAMES & MOORE, INC.

Julie Donsky
Environmental Scientist

CONTACT LIST

RAIL SEGMENTS

FEDERAL

U.S. ARMY CORPS OF ENGINEERS

U.S. Army Engineer District, Little Rock
P.O. Box 867
700 W. Capital
Little Rock, AR 72203-0867

U.S. Army Engineer Division,
South Pacific
630 Sansome Street, Room 720
San Francisco, CA 94111-2206

U.S. Army Engineer District, Los Angeles
P.O. Box 2711
Los Angeles, CA 90053-2325

U.S. Army Engineer District, Sacramento
1325 "J" Street
Sacramento, CA 95814-2922

U.S. Army Engineer District,
San Francisco
211 Main Street
San Francisco, CA 94105-1905

U.S. Army Engineer Division District,
North Central
111 N. Canal Street
Chicago, IL 60606-7206

U.S. Army Engineer District, Chicago
111 N. Canal Street, Suite 600
Chicago, IL 60606-7206

U.S. Army Engineer District, Rock Island
P.O. Box 2004
Rock Island, IL 61204-2004

U.S. Army Engineer District, New Orleans
P.O. Box 60267
New Orleans, LA 70160-0267

U.S. Army Engineer District,
Missouri River
P.O. Box 103, Downtown Station
Omaha, NE 68101-0103

U.S. Army Engineer District,
Missouri River
P.O. Box 103, Downtown Station
Omaha, NE 68101-0103

U.S. Army Engineer District, Albuquerque
P.O. Box 1580
Albuquerque, NM 87103-1580

U.S. Army Engineer Division, Ohio River
P.O. Box 1159
Cincinnati, OH 45201-1159

U.S. Army Engineer District, Tulsa
1645 S. 101st East Ave
Tulsa, OK 74128

U.S. Army Engineer Division,
North Pacific
P.O. Box 2870
Portland, OR 97208-2870

U.S. Army Engineer District, Portland
P.O. Box 2946
Portland, OR 97208-2946

U.S. Army Engineer District, Memphis
B-202 Federal Building
167 N. Main Street
Memphis, TN 38103-1894

U.S. Army Engineer Division,
Southwestern
1114 Commerce Street
Dallas, TX 75242-0216

U.S. Army Engineer Division,
Lower Miss Valley
P.O. Box 80
1400 Walnut Street
Vicksburg, MS 39181-0080

U.S. Army Engineer District, Vicksburg
3515 I-20-Frontage Road
Vicksburg, MS 39180-5191

U.S. Army Engineer District, Kansas City
700 Federal Building
Kansas City, MO 64106-2896

U.S. Army Engineer District, St. Louis
Regulatory Branch
1222 Spruce Street
St. Louis, MO 63103-2833

U.S. Army Engineer District, Galveston
P.O. Box 1229
Galveston, TX 77553-1229

U. S. Army Engineer District, Fort Worth
P.O. Box 17300
Fort Worth, TX 76102-0300

U.S. Army Engineer District, Seattle
P.O. Box 3755
Seattle, WA 98124-2255

U.S. Army Engineer District, Walla Walla
Building 602, City-County Airport
Walla Walla, WA 99362-9265

U.S. FISH AND WILDLIFE

U.S. FISH AND WILDLIFE SERVICE
Region 1
911 N.E. 11th Ave.
Portland, OR 97232-4181

U.S. FISH AND WILDLIFE SERVICE
Region 2
P.O. Box 1306
500 Gold Avenue, SW - Room 4000
Albuquerque, NM 87102

U.S. FISH AND WILDLIFE SERVICE
Region 3
One Federal Drive
Federal Building
Fort Snelling, MN 55111

U.S. FISH AND WILDLIFE SERVICE
Region 4
Richard B. Russell Federal Bldg.,
Rm. 1200
1875 Century Blvd., Ste. 200
Atlanta, GA 30345

U.S. FISH AND WILDLIFE SERVICE
Region 6
P.O. Box 25486
Denver Federal Center
Denver, CO 80225

U.S. ENVIRONMENTAL PROTECTION AGENCY REGIONAL OFFICES

USEPA
Region 5
77 West Jackson Boulevard
Chicago, IL 60604

USEPA, Region 6
1st Interstate Bank Tower
at Fountain Place
1445 Ross Avenue, 12th Floor, Ste 1200
Dallas, TX 75202

USEPA
Region 7
726 Minnesota Ave.
Kansas City, KS 66101

USEPA
Region 8
999 18th St, Ste 500
Denver, CO 80202-2466

USEPA
Region 9
75 Hawthorne Street
San Francisco, CA 94105

USEPA
Region 10
1200 Sixth Avenue
Seattle, WA 98101

BUREAU OF INDIAN AFFAIRS

Walter Mills
Area Director
Bureau of Indian Affairs
P.O. Box 10
Phoenix, AZ 85001

Roger M. Jaeger
Area Director
Bureau of Indian Affairs
2800 Cottage Way
Sacramento, CA 95825-1846

Keith Beartusk
Bureau of Indian Affairs
316 N. 26th Street
Billings, MT 59101-1362

Patrick A. Hayes
Area Director
Bureau of Indian Affairs
P.O. Box 26567
Albuquerque, NM 87125-6567

Denise Homer
Area Director
Bureau of Indian Affairs
331 S. Second Avenue
Minneapolis, MN 55401-2241

Wilson Barber
Area Director
Bureau of Indian Affairs
P.O. Box 1060
Gallup, NM 87305

L.W. Bill Collier
Area Director
Bureau of Indian Affairs
W.C.D. Office Complex
P.O. Box 368
Anadarko, OK 73005-0368

Bill Collier
Area Director
Bureau of Indian Affairs
101 N. 5th Street
Muskogee, OK 74401-6206

Joe Walker
Bureau of Indian Affairs
115 Fourth Avenue SE
Aberdeen, SD 57401

Nancy Jemison
Acting Area Director
Bureau of Indian Affairs
3701 N. Fairfax Drive
Mailstop VASQ 260
Arlington, VA 22203

DIRECTOR OF THE NATIONAL PARK SERVICE

Roger Kennedy
Director of National Park Service
Main Interior
1849 C Street NW
Washington, DC 20240

STATE

ARIZONA

Arizona State Clearinghouse
3800 N. Central Avenue, 14th Floor
Phoenix, AZ 85012

Department of Environmental Quality
3033 North Central Avenue
Phoenix, AZ 85012

State Conservationist
USDA Soil Conservation Service
3003 N. Central Avenue, Suite 800
Phoenix, AZ 85012-2945

Arizona State Parks
1300 West Washington
Phoenix, AZ 85007

Lupe Sanchez
Yuma County Housing Director
8540 W. Highway 95
Somerton, AZ 85350

Jimmy Kerr
Supervisor
Pinal County
820 E. Cottonwood Ln., Bldg. A
Casa Grande, AZ 85222

Paul Marsh
Chairman of the Board
Pima County
130 W. Congress, Floor 11
Tucson, AZ 85701

Leslie Thompson
Chairperson
Cochise County
1415 W. Melody Lane
Bisbee, AZ 85603

Tom Rawles
Chairman of the Board-Supervisor
Maricopa County
301 W. Jefferson Street
Phoenix, AZ 85003

ARKANSAS

Joseph Gillesbie
Manager State Clearinghouse
Office of Intergovernmental Service
Department of Finance
and Administration
P.O. Box 3278
Little Rock, AR 72203

Department of Arkansas Heritage
Arkansas Historic Preservation Program
The Heritage Center
323 Center Street, Ste 1500
Little Rock, AR 72201

Department of Pollution Control
and Ecology
P.O. Box 9583
Little Rock, AR 72219

State Conservationist
USDA Soil Conservation Service
5404 Federal Building
700 W. Capitol Avenue
Little Rock, AR 72201

Honorable Judge Hubert Easley
Miller County
450 Laurel, Ste. 115
Texarkana, AR 75502

Honorable Judge Leroy Dangeau
Cross County
705 E. Union, Rm.4
Winne, AR 72396

Honorable Judge Roy C. Bearden
Craighead County
511 S. Union
Jonesboro, AR 72403

Honorable Judge Bill Craft
Poinsett County
401 Market St.
Harrisburg, AR 72432

County Judge
Woodruff County
500 N. 3rd
Augusta, AR 72006

County Judge
Arkansas County
101 Court Square
DeWitt, AR 72042

Honorable Judge DeVore
Prairie County
P.O. Box 278
Des Arc, AR 72040

Honorable Judge Tom Catlett
Monore County
123 Madison
Clarendon, AR 72029

Honorable Judge David Lange
Greene County
P.O. Box 364
Paragould, AR 72450

Honorable Judge Sheldon Settlemoir
Clay County
P.O. Box 385
Piggott, AR 72454

CALIFORNIA

Office of Historic Preservation
Department of Parks and Recreation
P.O. Box 942896
Sacramento, CA 94296-0001

Environmental Protection Agency
555 Capitol Mall
Sacramento, CA 95814

State Conservationist
USDA Soil Conservation Service
2121-C Second Avenue
Davis, CA 95616-5475

Mark Delaplaine
California Coastal Commission
45 Fremont Street, Ste 2000
San Francisco, CA 94105-2219

Mike Chiratti
Chief Projects Analyst
Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814

Sally Reed
Chief Administrative Officer
Los Angeles County
500 W. Temple Street
Los Angeles, CA 90012

Patrick O'Connell
Alameda County
1221 Oak Street
Oakland, CA 94612

George Barber
Chairman of the Board of Supervisors
San Joaquin Courthouse, Room 701
Stockton, CA 95202

Jane Dumston
Acting County Administrator
Yuba County
215 5th Street
Marysville, CA 95901

Larry Combs
Sutter County Administrator
1160 Civic Center Blvd.
Yuba City, CA 95993

Marsha Turoci
Chairperson of the Board
San Bernardino County
385 N. Arrowshead Avenue
San Bernardino, CA 92415-0110

Gerald Maloney
Clerk-Board of Supervisors
Riverside County
County Administrator Center
4080 Lemon St., Floor 14
Riverside, CA 92501-3655

Richard Inman
Imperial County
Board of Supervisor-Administration
940 Main Street, #208
El Centro, CA 92243

Ron Liehau
Chairman of the Board of Supervisors
Placer County
175 Fulweiler Avenue
Auburn, CA 95603

Chairman of the Board of Supervisors
Sacramento County
P.O. Box 839
Sacramento, CA 95812-0839

Linda Terra
Solano County
580 Texas Street
Fairfield, CA 94533

Contra Costa County
P.O. Box 911
Martinez, CA 94553

Karen Knecht
Chairman of the Board
Nevada County
950 Maidu Avenue
Nevada City, CA 95959-8617

Jerry Giardino
Chairman of the Board
Siskiyou County
P.O. Box 338
Yreka, CA 96097

Shirley Mareili
Chairman
Tehama County
P.O. Box 250
Red Bluff, CA 6080

Erwin Fust
Chairman
Shasta County
1815 Yuba, Ste. 1
Redding, CA 96001

Ed McLaughlin
Administration Office
Butte County
25 County Center Drive
Oroville, CA 95965

Jerry McCaffrey
Sierra County
P.O. Drawer D
Downieville, CA 95936

Contra Costa County
P.O. Box 911
Martinez, CA 94553

COLORADO

State Single Point of Contact
State Clearinghouse
Division of Local Government
1313 Sherman Street, Room 521
Denver, CO 80203

Bill Vidal
Executive Director
Colorado Department of Transportation
4201 E. Arkansas Avenue #262
Denver, CO 80222

Colorado Historical Society
1300 Broadway
Denver, CO 80203

Department of Natural Resources
1313 Sherman Street, Room 718
Denver, CO 80203-3528

State Conservationist
USDA Soil Conservation Service
655 Parfet Street, E200C
Lakewood, CO 80215-5517

Dick Norman
Colorado Division of Wildlife
6060 Broadway
Denver, CO 80216

Stewart Macdonald
State Parks
1313 Sherman Street, Room 618
Denver, CO 80203

Dale Hall
Chairperson
Weld County
P.O. Box 758
Greenley, CO 80632

Mayor's Office
Denver County
City & County Building
1437 Bannock, Room 350
Denver, CO 80202

Elaine Valente
Chairperson
Adams County
450 S. 4th Street
Brighton, CO 80601

Gary D. Laura
County Commissioner
Jefferson County
100 Jefferson County Parkway
Golden, CO 80419

James Johnson
Chairman
Eagle County
P.O. Box 850
Eagle, CO 81631

Charlotte Heinz
Chairperson
Elbert County
P.O. Box 597
Kiowa, CO 80117

Tommy Eggert
Chairman
Arapahoe County
5334 S. Prince Street
Littleton, CO 80166

Charles R. Covington
Chairman
Lincoln County
Hugo, CO 80821

Leroy Herndon
Chairman
Kit Carson County
Burlington, CO 80807

Jim Disney
Chairman of the Board of Commissioners
Larimer County
P.O. Box 1190
Fort Collins, CO 80522

Ralph Knull
Chairman of the Board of Commissioners
Gilpin County
P.O. Box 366
Central City, CO 80427

Ron Stewart
Chairman of the Board of Commissioners
Boulder County
P.O. Box 471
Boulder, CO 80306

Paul J. Ohri
Chairman of the Board of Commissioners
Grand County
P.O. Box 264
Hot Sulphur Springs, CO 80451

Cheyenne County Commissioner
P.O. Box 567
Cheyenne Wells, CO 80810

ILLINOIS

Steve Klokkenga
State Single Point of Contact
Office of the Governor, State of Illinois
107 Stratton
Springfield, IL 62706

Don Vonnahme
Director
Department of Transportation
Room 401 - Annex Building
2300 South Dirksen Parkway
Springfield, IL 62764

Illinois Historic Preservation Agency
1 Old State Capitol Plaza
Springfield, IL 62701-1512

Environmental Protection Agency
P.O. Box 19276
Springfield, IL 62794

State Conservationist
USDA Soil Conservation Service
1902 Fox Drive
Champaign, IL 61820

Ron Hanley
County Chairman
Bureau County Courthouse
700 S. Main
Princeton, IL 61356

Richard Underwood
Chairman of the County Board
DeKalb County
110 E. Sycamore
Sycamore, IL 60178

Ron Conderman
Chairman
Lee County
112 E. 2nd Street
Dixon, IL 61021

Warren Krammerer
Kane County
719 E. Batavia Avenue
Geneva, IL 60134

Jerry Davis
Ogle County
10880 W. Coffman
Forreston, IL 61030

Tony Ardvini
Chairman of the County Board
Whiteside County Courthouse
200 E. Knox Street
Morrison, IL 61270

Gayle Franzen
Dupage County Board
421 N. County Farm Road
Wheaton, IL 60187

Cook County Clerks Office
118 N. Clark
Chicago, IL 60602

Tom Nicholson
Henry County
11500 R. 250 Street
Lynn Center, IL 61262

Board of Commissioners
Knox County
200 S. Cherry
Galesburg, IL 61401

Max Call
Vermilion County Board Chairman
6 N. Vermilion
Courthouse Annex
Vermilion, IL 61832

Dale Widholm
Iroquois County
Route 2, Box 26
Clifton, IL 60927

Dale Bateman
Douglas County
1901 W. Prairie Street
Route 4, Box 160
Tuscola, IL 61953

Russell Thompson
Chairman of the Board
Kankakee County
189 E. Court Street
Kankakee, IL 60901

Charles R. Adelman
Chief Executive Officer
Will County
302 N. Chicago
Joliet, IL 60431

Lyle Shields
Chairman
Champaign County Board Members
204 E. Elm
Urbana, IL 61801

IOWA

Beth Foster
R & C Coordinator
State Historical Society of Iowa
600 E. Locust Street
Des Moines, IA 50319-0290

Department of Natural Resources
Wallace State Office Building
Des Moines, IA 50319

State Conservationist
USDA Soil Conservation Service
693 Federal Building
210 Walnut Street
Des Moines, IA 50309

Steven R. McCann
Division for Community Progress
Iowa Department of
Economic Development
200 East Grand Avenue
Des Moines, IA 50309

Susan Bonham
Auditor
Harrison County
113 N. 2nd Street
Logan, IA 51546

Edward Compton
Chairman of the Board of Supervisors
Cedar County
400 Cedar Street
Tipton, IA 52772

Jean Oxley
Chairperson
Linn County
930 1st Street, SW
Cedar Rapids, IA 52404

Dall Hanson
Chairperson
Benton County
P.O. Box 549
Vinton, IA 52349

Jill Davison
Clinton County Courthouse
P.O. Box 2957
Clinton, IA 52733-2957

Miriam Turnbull
Chairperson
Board of Supervisors
Blackhawk County Courthouse
316 E. 5th Street
Waterloo, IA 50703

KANSAS

Department of Transportation
Room 800 N
Docking State Office Bldg.
Topeka, KS 66612

Kansas Corporation Commission
1500 SW Arrowhead Road
Topeka, KS 66604

Kansas State Historical Society
120 West 10th Street
Topeka, KS 66612

Department of Health and Environment
Division of Environment
Landon State Office Building
901 S.W. Jackson Street
Topeka, KS 66612

State Conservationist
USDA Soil Conservation Service
760 South Broadway
Salina, KS 67401

Dave Graversen
City of Topeka Parks & Recreation
Room 259, City Hall
Topeka, KS 66603

Donald J. Cooper
Chairman of the Board
Shawnee County Courthouse
200 E. 7th St., Rm. B-11
Topeka, KS 66603

Douglas Mackley
Chairman of the Board
Logan County
710 West 2nd Street
Oakley, KS 67748

Ralph Moustmeyer
Chairman of the Board
Gove County
P.O. Box 128
Gove, KS 67736

Glevn Lowe
Chairman of the Board
Trago County
216 N. Main
Wakeeney, KS 67672

John Welsh
Chairman of the Board
Wallace County
P.O. Box 70
Sharon Springs, KS 67758

Guy Windholz
Chairman of the Board
Ellis County
P.O. Box 720
Hayes, KS 67601

Don Hoberer
Chairman of the Board
Russell County
P.O. Box 113
Russell, KS 67665

Donald F. Hansen
Chairman of the Board
Ellsworth County
210 N. Kansas
Ellsworth, KS 67439

Gary Hindman
Chairman of the board
Saline County
P.O. Box 5040
Salina, KS 67402-5040

George Schlesener
Chairman of the Board
Dickenson County
P.O. Box 248
Abilene, KS 67410

Mark Schroeder
Chairman of the Board
Sedgwick County
525 N. Main, 3rd Fl.
Wichita, KS 67203

Joe North
Chairman of the Board
Sumner County Courthouse
Wellington, KS 67152

Leon White
Chairman of the Board
Butler County Courthouse, 2nd Fl.
205 W. Central
El Dorado, KS 67042

Charles DeForest
Chairman of the Board
Marion County
P.O. Box 219
Marion, KS 66861

Jimmy Perry
Chairman
Reno County
206 W. First
Hutchinson, KS 67501

Michael Myatt
Chairman
Clark County
P.O. Box 886
Ashland, KS 67831

Joe Sealey
Chairman
Seward County
415 N. Washington, Ste. 111
Liberal, KS 67901

Jim Williams
Chairman
Riley County
110 Courthouse Plaza
Manhattan, KS 66502

Manford Clark
Chairman
Kiowa County
2111 E. Florida
Greensburg, KS 67054

Harold Rickers
Chairman
Meade County
P.O. Box 278
Meade, KS 67864

Richard Carlson
Chairman
Pottawatomie County
P.O. Box 187
Westmoreland, KS 66549

Florence Whitebread
Chairperson
Geary County
139 East 8th
Junction City, KS 66441

Kenith Meier
Chairman of the Board
Harvey County
P.O. Box 687
Newton, KS 67114

Steph Bickson
County Clerk
Ford County
P.O. Box 458
Bucklin, KS 67834

Alma Walker
County Clerk
Pratt County
P.O. Box 885
Pratt, KS 67124

LOUISIANA

Office of Cultural Development
Dept. of Culture, Recreation and Tourism
P.O. Box 44247
Baton Rouge, LA 70804

Department of Environmental Quality
P.O. Box 44066
Baton Rouge, LA 70804

State Conservationist
USDA Soil Conservation Service
3737 Government Street
Alexandria, LA 71302

Director
Coastal Management Division
Department of Natural Resources
P.O. Box 44487
Baton Rouge, LA 70804-4487

Louisiana Public Service Commission
P.O. Box 91154
Baton Rouge, LA 70821-9154

Marc McMurry
Parish Administrator
Calcasieu Parish
P.O. Draw 3287
Lake Charles, LA 70602

President Clement Guidroz
Pointe Coupee Police Jury
P.O. Box 290
New Roads, LA 70760

President Al Bihm
St. Landry Police Jury
P.O. Box 551
Opelousas, LA 70571

Sheriff Harold A. Turner
Allen Parish
P.O. Box 278
Oberlin, LA 10655

Bob Manuel
President
Evangeline Parish Police Jury
Courthouse Square
Ville Platte, LA 70586

Joe Arabie
Acadia Police Jury
Courthouse Building
Crowley, LA 70526

Jefferson Davis Parish
Jefferson Davis Parish Police Jury
P.O. Box 1409
Jennings, LA 70546

Dennis Woodward
Caddo Parish Administrator
P.O. Box 68
Benton, LA 71006

A.W. MacDonald
President
De Soto Parish
P.O. Box 898
Mansfield, LA 71052

Tommy Scarborough
President
Bossier Parish
P.O. Box 68
Benton, LA 71006

MISSOURI

Lois Pohl, Office of Administration
Federal Assistance Clearinghouse
Division of General Services
P.O. Box 809, Room 760,
Truman Building
Jefferson City, MO 65102

Office of Historic Preservation
205 Jefferson
P.O. Box 176
Jefferson City, MO 65102

Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102

State Conservationist
USDA Soil Conservation Service
Parkade Center, Suite 250
601 Business Loop 70 W.
Columbia, MO 65203-2546

Norman Moore
Presiding Commissioner
Stoddard County
Box H
Bloomfield, MO 63825

Don Jones
Presiding Commissioner
Dunklin County
P.O. Box 188
Kennett, MO 63857

NEBRASKA

Nebraska Public Service Commission
P.O. Box 94927
Lincoln, NE 68509-4927

Nebraska State Historical Society
P.O. Box 82554
1500 "R" Street
Lincoln, NE 68501

Department of Environmental Control
P.O. Box 98922
Lincoln, NE 68509-8922

State Conservationist
USDA Soil Conservation Service
345 Federal Building
100 Centennial Mall N.
Lincoln, NE 68508-3866

John Lutz
Chairman
Washington County
P.O. Box 466
Blair, NE 68008

Dean Lux
Chairman of the Board of Supervisors
Dodge County
435 N. Park
Fremont, NE 68025

NEVADA

Dana G. Strum
Clearinghouse Coordinator
Department of Administration
State Clearinghouse, Capitol Complex
209 East Musser, Room 204
Carson City, NV 89710

Division of Historic Preservation
and Archeology
101 South Stewart Street
Capital Complex
Carson City, NV 89710

Department of Conservation and
Natural Resources
123 W. Nye Lane, Room 230
Carson City, NV 89710

State Conservationist
USDA Soil Conservation Service
5301 Longley Lane
Building F, Ste 201
Reno, NV 89511

Ron Schrempp
Chairman of the Board
Humbolt County Courthouse, Room 205
Winnemucca, NV 89445

Lee Chapman
Chairman of the Board
Elko County
569 Court Street
Elko, NV 89801

Washoe County Clerks Office
Courthouse
Reno, NV 89501

Board of Commissioners
Lyon County
31 S. Main
Yerington, NV 89447

Henry Bland
Chairman of the Board of Commissioners
Storey County
P.O. Drawer D
Virginia City, NV 89440

Dave Auyoob
Chairman of the Board of Commissioners
Pershing County
P.O. Drawer E
Lovelock, NV 89419

James Regan
Chairman of the Board of Commissioners
Churchill County
10 W. Williams Avenue
Fallon, NV 89406

NEW MEXICO

Bob Peters
Single Point of Contact
State Budget Division, DFA
Room 190, Bataan Memorial Building
Santa Fe, NM 87503

Historic Preservation Division
Office of Cultural Affairs
Villa Rivera, Room 101
228 East Palace Avenue
Santa Fe, NM 87503

Department of Health and Environment
1190 St. Francis Drive
Santa Fe, NM 87503

State Conservationist
USDA Soil Conservation Service
517 Gold Avenue, N.W. Ste 3301
Albuquerque, NM 87102-3157

New Mexico Ecological Services
State Office
2105 Osuna NE
Albuquerque, NM 87113

New Mexico Department of Game & Fish
Villagra Building
Santa Fe, NM 87504

New Mexico Energy Minerals
& Natural Resources
Park & Recreation Division
408 Galisteo St., Villagra Building
Santa Fe, NM 87503

Luis Cardoza
County Manager
Grant County
P.O. Box 898
Silver City, NM 88062

Ken Miyagishima
Dona Ana County
County Commissioner-Chairman
180 W. Amador
Las Cruces, NM 88005

Llyod Payne
County Chairman
Hidalgo County
300 Shakespeare
Animas, NM 88045

Scott Vinson
County Manager
Luna County
P.O. Box 551
Deming, NM 88031

Glen Briscoe
Chairman
Quay County
4490 Quay Road 55
Tucumcari, NM 88401

Paul Madrid, Jr.
Chairman
Guadalupe County
P.O. Box 111
Von, NM 88435

Bill Williams
Chairman
Torrance County
P.O. Box 48
Estancia, NM 87016

Mary Quintana
County Clerk
Otero County
1000 New York Avenue
Alamogordo, NM 88310

Martha Proctor
County Clerk
Lincoln County
P.O. Box 338
Carrizozo, NM 88301

OKLAHOMA

Department of Transportation
200 NE 21st Street
Oklahoma City, OK 73105-3204

Oklahoma Corporation Commission
Jim Thorpe Building
Oklahoma City, OK 73105

Oklahoma Historical Society
2100 N. Lincoln Blvd.
Oklahoma City, OK 73105

Department of Environmental Quality
1000 NE 10th Street
Oklahoma City, OK 73117

State Conservationist
USDA Soil Conservation Service
Agricultural Center Building
100 USDA, Ste 203
Stillwater, OK 74074

Ken Wall
Chairman of the County Commissioners
Jefferson County
220 N. Main, Room 101
Waurika, OK 73573

Ealmer Klippel
Chairman of the Board
of County Commissioners, Grady County
4th and Choctaw
Chickasha, OK 73018

Grant County Commissioners
P.O. Box 167
Medford, OK 73759

Charles Brandley
Chairman of the Board of
County Commissioners
Canadian County
201 N. Choctaw
El Reno, OK 73036

Henry Senn
Chairman of the Board of
County Commissioners
Kingfisher County
101 S. Main, Room 3
Kingfisher, OK 73750

Wendell Vencl
Chairman of the Board of
County Commissioners
Garfield County Courthouse, Rm. 101
Enid, OK 73701

Chairman of the Board of
County Commissioners
Texas County
P.O. Box 197
Guymon, OK 73942

Gary Ledford
Chairman
Stephen County Courthouse
Duncan, OK 73533

OREGON

Department Of Transportation
State Transportation Bldg.
Salem, OR 97310

Oregon Public Utility Commission
300 Labor and Industries Bldg.
Salem, OR 97310

Department of Environmental Quality
811 S.W. 6th Avenue
Portland, OR 97204

State Conservationist
USDA Soil Conservation Service
1640 Federal Building
1220 S.W. 3rd Avenue
Portland, OR 97204

Coastal and Ocean
Program Management
Dept. of Land Conservation
and Development
800 N.E. Oregon Street #18
Portland, OR 97223

State Parks and Recreation Department
1115 Commercial Street, NE
Salem, OR 97310-1001

Betsy Williams
Dir. of Dept. of Environmental Srvs.
Multnomah County
2115 SE Morrison
Portland, OR 97214

John Mabrey
Chairman of the Board of Commissioners
Wasco County
511 Washington Street
The Dalles, OR 97058

Judy Hammersted
Board of County Commissioners
Clakamas County
906 Main Street
Oregon City, OR 97045

Cliff McMillan
Chairman of the Board
Klamath County
403 Pine
Klamath Falls, OR 97601

Ellie Dumdi
Chairperson of the Board
Lane County
125 E. 8th Avenue
Eugene, OR 97401

Mary Pearmine
Chairperson
Marion County
100 High Street, NE
Salem, OR 97301

Honorable Judge Mike McArthur
Sherman County
P.O. Box 365
Moro, OR 97039

Honorable Judge Laura Pryor
Gilliam County
P.O. Box 427
Condon, OR 97823

Board of Commissioners
Hood River County
309 State Street, Room 107
Hood River, OR 97031

Richard Stach
Chairman of the Board of Commissioners
Linn County
P.O. Box 100
Albany, OR 97321

TEXAS

Tom Adams
Governor's Office of Budget and Planning
P.O. Box 12428
Austin, TX 78711

Texas Historical Commission
P.O. Box 12276, Capitol Station
Austin, TX 78711

Environmental Protection Division
P.O. Box 12548
Austin, TX 78711-2548

State Conservationist
USDA Soil Conservation Service
Poage Federal Building
101 S. Main Street
Temple, TX 76501-7682

Andrew Sansom
Executive Director
Parks and Wildlife Commission
4300 Smith School Road
Austin, TX 78744

Dan Pearson
Executive Director
Natural Resources Conservation Commission
12100 Park 35 Circle
P.O. Box 13087
Austin, TX 78711-3087

Judge Larry Craig
Smith County
Smith County Courthouse, Rm.304
100 N. Broadway
Tyler, TX 75702

Honorable Judge Charles W. Mattox
El Paso County
El Paso County Courthouse
500 E. San Antonio, Ste. 301
El Paso, TX 79901

Honorable Judge James Carlow
Bowie County
P.O. Box 248
New Boston, TX 75570

Honorable Judge Cleve E. Steed
Montague County
P.O. Box 475
Montague, TX 76251

Honorable Judge Tom Vandergriff
Tarrant County
100 E. Watherford
Fort Worth, TX 76196-0101

Honorable Judge L.B. McDonald
Wise County
P.O. Box 393
Decatur, TX 76234

Honorable Judge Maxine Darst
Kaufman County Courthouse
Kaufman, TX 75142

W.C. Fesler, Chairman
Sherman County
P.O. Box 165
Stratford, TX 79084

Honorable Judge David Field
Dallam County
P.O. Box 9395
Dalhart, TX 79022

Honorable Ronnie Gordon
Hartley County
Box G
Channing, TX 79018

Earl Bullock
Dallas County Clerk
509 Main Street
Dallas, TX 75202

County Judge
Culberson County
306 LaCaverna
Van Horn, TX 79855

Honorable Judge Ben Lockhart
Howard County
300 Main
Big Spring, TX 79720

Honorable Judge Sam Massey
Ward County
400 S. Main
Monahans, TX 79756

Honorable Judge Jimmy Galindo
Reeves County
P.O. Box 749
Pecos, TX 79772

Honorable Judge Richard Lawrence
Van Zandt County
121 E. Dallas, Room 201
Cantor , TX 75103

Mark Sweeney
East Texas Council of Governments
3800 Stone Road
Kilgore, TX 75662

Honorable Jeff Norwood
Midland County
200 W. Wall Street, Ste. 006
Midland, TX 79707

Honorable Lee E. Williams
Wood County
P.O. Box 938
Quitman, TX 75783

Honorable Judge Charles Still
Upshur County
P.O. Box 790
Gilmer, TX 75644

Honorable Judge Harold M. Couch
Palo Pinto County
P.O. Box 190
Palo Pinto, TX 76484

Honorable Judge Tommy Kissler
Cass County
P.O. Box 825
Linden, TX 75563

Honorable Judge Denny Crooks
Titus County
100 W. 1st, Suite 200
Mount Pleasant, TX 75455

Honorable Judge Jim T. Jordan
Ector County
300 N. Grant, Room 227
Odessa, TX 79761

Honorable Judge White
Crane County
P.O. Box 457
Crane, TX 79731

Honorable Judge Peggy Robertson
Jeff Davis County
P.O. Box 1036
Fort Davis, TX 79734

Honorable Judge Vanoy Boozer
Morris County
500 Broadnax
Daingerfield, TX 75638

Preston Combest
Camp County
126 Church Street
Pittsburg, TX 75686

Honorable Judge Davenport
Martin County
P.O. Box 1330
Stanton, TX 79782

Honorable Judge James Peace
Hudspeth County
P.O. Box 68
Sierra Blanca, TX 79851

Honorable Judge Jack Aycock
Nolan County
100 E. 3rd Street
Sweetwater, TX 79556

Honorable Judge Ray Mayo
Mitchell County
349 Oak
Colorando City, TX 79512

Honorable Judge Ben Long
Parker County
One Courthouse Square
Weatherford, TX 76086

Honorable Judge Scott Bailey
Eastland County
P.O. Box 327
Eastland, TX 76448

Honorable Judge Bill Johnson
Callahan County
400 Market Street, Suite 200
Baird, TX 79504

Honorable Judge Lee Hamilton
Taylor County
300 Oak
Abilene, TX 79602

Honorable Judge Richard P. LeBlanc
Jefferson County
P.O. Box 4025
Beaumont, TX 77704

Honorable Judge Marshall Bennett
Fisher County
P.O. Box 306
Roby, TX 79543

Honorable Judge Carl Tibideaux
Orange County
801 Division, Room 207
Orange, TX 77630

Honorable Judge Ocie Westmoreland
Nacogdoches County
101 W. Main Street
Nacogdoches, TX 75961

Joe Berry
Angelina County
P.O. Box 908
Lafkin, TX 75902

Honorable Judge John G. Willy
Brazoria County
111 E. Locust
Angelton, TX 77515

Honorable Judge Loy Sneary
Matagorda County
1700 7th Street, Room 301
Bay City, TX 77414

Honorable Judge Helen R. Walker
Victoria County
115 N. Bridge, Rm.127
Victoria, TX 77901

Honorable Judge Floyd Watson
Shelby County
200 St. Augustine
P.O. Box 6
Center, TX 75935

Honorable Judge Harrison Stafford II
Jackson County
115 W. Main
Edna, TX 77957

UTAH

Carolyn Wright
Utah State Clearinghouse
Office of Planning and Budget
Room 116 State Capitol
Salt Lake City, UT 84114

Utah State Historical Society
300 Rio Grande
Salt Lake City, UT 84101

Division of Environmental Health
P.O. Box 16700
Salt Lake City, UT 84116-0700

State Conservationist
USDA Soil Conservation Service
4402 Bennett Federal Building
125 S. State Street
Salt Lake City, UT 84147

R. Lee Allen
County Commissioner
Box Elder County
Number 1 South Main
Brigham City, UT 84302

Bruce Anderson
Commissioner
Weber County
2549 Washington Blvd.
Ogden, UT 84401

Sheldon Richins
Summit County
P.O. Box 128
Coalville, UT 84017

Dale C. Wilson
Morgan County
P.O. Box 886
Morgan, UT 84050

Gayle Stevenson
Davis County
P.O. Box 618
Farmington, UT 84025

Gordon M. Young
Chairman of the Board of Commissioners
Juab County
160 N. Main
Nephi, UT 84648

Tex Olsen
Chairman of the Board of Commissioners
Millard County
250 N. Main
Richfield, UT 84701

Chairman of the Board of Commissioners
Utah County
100 E. Center
Provo, UT 84606

Sarah Ann Skanchy
Rich County
170 N. Main
Logan, UT 84321

WASHINGTON

Department of Transportation
Transportation Bldg. NS-KF-01
Olympia, WA 98504

Washington Utilities and
Tptn. Commission
1300 South Evergreen Park Drive, SW
Olympia, WA 98504

Office of Archeology and
Historic Preservation
111 W. 21st Avenue, KL-11
Olympia, WA 98504

Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

State Conservationist
USDA Soil Conservation Service
Rock Pointe Tower II
316 Boone Avenue, Suite 450
Spokane, WA 99201-2348

Program Manager
Shorelands and Coastal
Zone Mgt. Program
Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

King County Clerks Office
516 3rd Seattle
Seattle, WA 98028

John Taylor
Chairman of the Board of Commissioners
Cowlitz County
207 4th North
Kelso, WA 98626

Carl Hemenway
Chairman of the Board of Commissioners
Lewis County
360 NW North Street
MS: CMS01
Chehalis, WA 98532-1900

County Council
Pierce County
930 Tacoma
Tacoma, WA 98402

Board of Commissioners
Clark County
P.O. Box 5000
Vancouver, WA 98668-5000

Judy Wilson
Chairman of the Board of Commissioners
Thurston County
2000 Lakerich Drive, SW
Olympia, WA 98502

WISCONSIN

William C. Carey, Section Chief
Federal/State Relations Office
IGA Relations, 6th Floor
101 E. Wilson St., P.O. Box 7868
Madison, WI 53707-7868

Historic Preservation Division
State Historical Society of Wisconsin
816 State Street
Madison, WI 53706

Department of Natural Resources
P.O. Box 7921
Madison, WI 53707

State Conservationist
USDA Soil Conservation Service
6515 Watts Road, Ste 200
Madison, WI 53719-2726

Coastal Policy Section
Div of Energy & Intergovernmental
Relation, 6th Floor, Department
of Administration
P.O. Box 7868, 101 E. Wilson
Madison, WI 53707-7868

Wisconsin Department of Transportation
James S. Thiel, General Counsel
Office of General Counsel
P.O. Box 7910, Room 115-B, HFSTB
Madison, WI 53707-7910

Robert Jackson
Chairman
Milwaukee County
901 N. 9th Street, Room 201
Milwaukee, WI 53233

WYOMING

Sheryl Jeffries
Single Point of Contact
Wyoming State Clearinghouse
State Planning Coordinator's Office
State Capitol Building, Room 124
Cheyenne, WY 82002

Wyoming State Historic
Preservation Division
4th Floor - Barrett Building
2301 Central Avenue
Cheyenne, WY 82002

Department of Environmental Quality
Herschler Building
122 W. 25th Street
Cheyenne, WY 82002

State Conservationist
USDA Soil Conservation Service
3124 Federal Building
100 East "B" Street
Casper, WY 82601

Nick Mirach
Chairman of County Commissioners
Laramie County
309 W. 20th
Cheyenne, WY 82001

Pat Gabriel
Albany County
Chairman of County Commissioners
Albany County Courthouse
Laramie, WY 82070

Kathy Davison
Lincoln County
P.O. Box 670
Klemmerer, WY 83101

William Harshman
Carbon County
P.O. Box 6
Rawlins, WY 82301

Linda Taliaserro
Chairman of the Board of Commissioners
Sweetwater County
P.O. Box 730
Green River, WY 82935

John G. Fanos
Uinta County
P.O. Box 810
Evanston, WY 82931-0810

AGENCY RESPONSES

RAIL SEGMENTS

DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
700 FEDERAL BUILDING
KANSAS CITY, MISSOURI 64106-2896

REPLY TO
ATTENTION OF:

October 23, 1995

Western Project Section
(96-00114)

Ms. Julie Donsky
Environmental Scientist
Dames & Moore, Inc.
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

This is in reply to your October 4, 1995, letter requesting comments concerning the merger of Union Pacific and Southern Pacific Railroads.

The Corps of Engineers has jurisdiction over all waters of the United States. Excavation or discharges of dredged or fill material in waters of the United States, including wetlands, require prior authorization from the Corps under Section 404 of the Clean Water Act (33 USC 1344). The implementing regulation for this Act is found at 33 CFR 320-330.

Should the proposed improvements require excavation or the discharge of dredged or fill material in any waters of the United States, including wetlands, a Department of the Army (DA) permit may be required. However, if the proposed improvements do not require excavation or the discharge of dredged or fill material in any waters of the United States, including wetlands, a DA permit will not be required.

We have assigned reference numbers to the three segments within our district's authority. Please reference these numbers should you have apply for Department of the Army authorization.

96-00114 Hutchinson, Ks to El Paso, Texas
96-00115 Denver, Colorado to Topeka, Ks
96-00116 Herington, Ks to Fort Worth, Texas

If there are any questions regarding wetlands being involved, enclosed is a list of individuals and firms available to conduct preliminary jurisdictional wetland determinations for submission to the Kansas City District Corps of Engineers for DA permit requirements.

Federal regulations require that a DA permit be issued by the Corps of Engineers prior to the initiation of any construction on the portion of a proposed activity which is within the Corps' regulatory jurisdiction.

Also, enclosed is a copy of our brochure entitled "Activities Requiring Permits."

If you have any questions concerning this matter, please feel free to write or call me at 816-426-5500 (FAX 816-426-2321).

Sincerely,

Chad Remley
Regulatory Project Manager
Regulatory Branch

Enclosures

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P.O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

October 16, 1995

Planning Division

Mrs. Julie Donsky
Dames & Moore
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois, 60008

Dear Mrs. Donsky:

This is in response to your letter dated September 26, 1995, concerning the Environmental Report for the application for merger of the Union Pacific and Southern Pacific Railroads. It has been determined that the proposed project is not within the jurisdiction of the U.S. Army Corps of Engineers, Fort Worth District. Your letter has been forwarded to the Albuquerque District for review.

A map of the Regulatory Boundary for the Fort Worth District is enclosed for your information. If you have any questions concerning the review of your project, the Albuquerque District may be contacted at the following address:

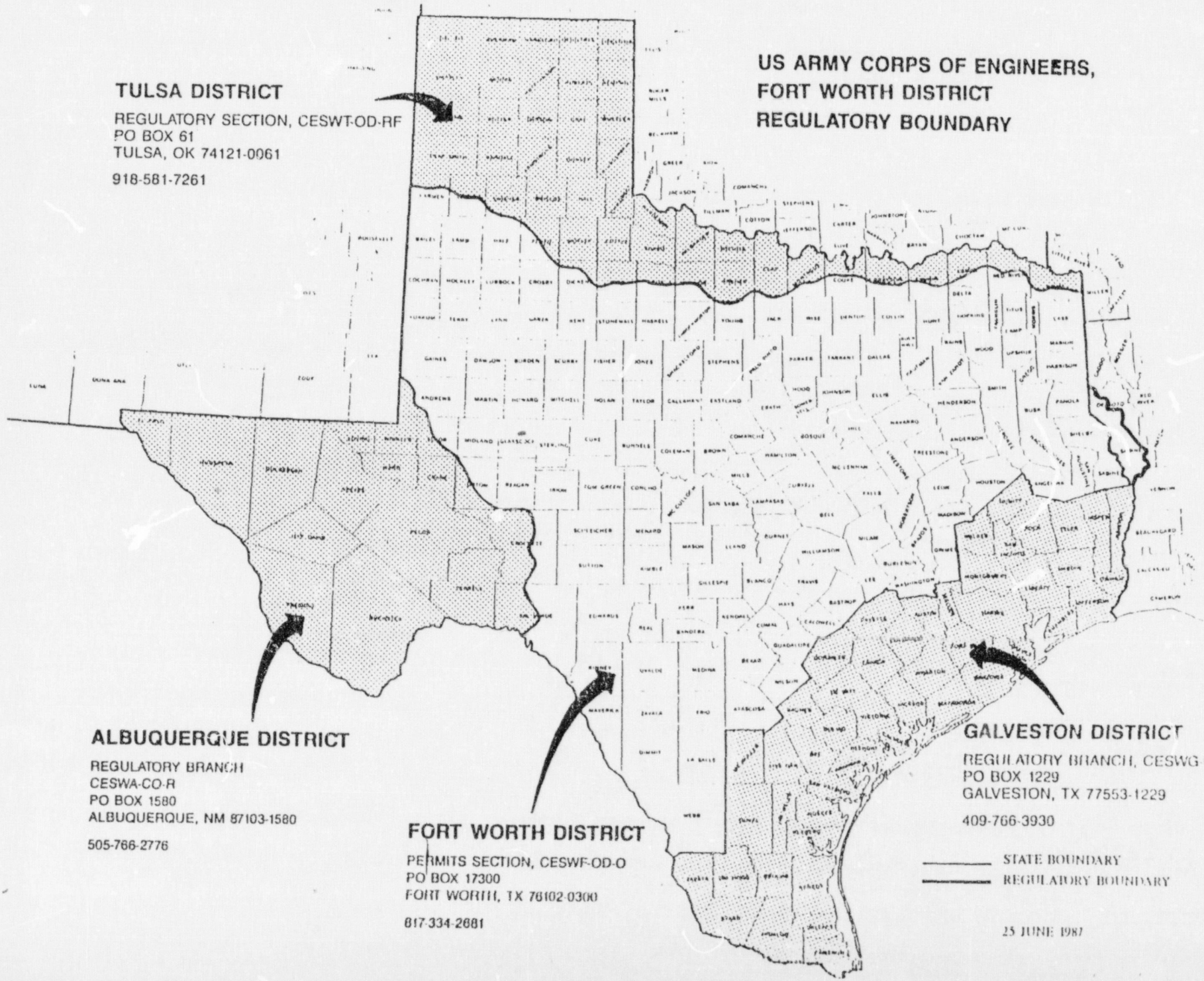
U.S. Army Corps of Engineers, Albuquerque District
Operations Division, CESWA-CO-R
ATTN: Andy Rosenau
P.O. Box 1580
Albuquerque, New Mexico 87103-1580

We apologize for the inconvenience.

Sincerely,

Paul M. Hathorn
Chief, Environmental Resources

Enclosure


US ARMY CORPS OF ENGINEERS,
FORT WORTH DISTRICT
REGULATORY BOUNDARY
TULSA DISTRICT
REGULATORY SECTION, CESWT-OD-RF
PO BOX 61
TULSA, OK 74121-0061
918-581-7261
ALBUQUERQUE DISTRICT
REGULATORY BRANCH
CESWA-CO-R
PO BOX 1580
ALBUQUERQUE, NM 87103-1580
505-766-2776
FORT WORTH DISTRICT
PERMITS SECTION, CESWF-OD-O
PO BOX 17300
FORT WORTH, TX 76102-0300
817-334-2681
GALVESTON DISTRICT
REGULATORY BRANCH, CESWG-CO-R
PO BOX 1229
GALVESTON, TX 77553-1229
409-766-3930
STATE BOUNDARY
REGULATORY BOUNDARY
25 JUNE 1987

0447

DEPARTMENT OF THE ARMY
ALBUQUERQUE DISTRICT, CORPS OF ENGINEERS
EL PASO RESIDENT OFFICE
P.O. BOX 6096, FORT BLISS, TEXAS 79906-0096
FAX (915) 568-1348

REPLY TO
ATTENTION OF

October 10, 1995

Construction and Operations Division
Regulatory Branch

Ms. Julie Donsky
Dames & Moore
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

Reference is made to your letter dated September 26, 1995 regarding the Corps of Engineers' permitting authority as it relates to the Colton, California to El Paso, Texas rail segment which may see an increase in activity as a result of the proposed merger of the Union Pacific and Southern Pacific Railroads. (Action ID No. 1995 50152)

U.S. Army Engineer District, Albuquerque, has permitting authority pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act from the Arizona - New Mexico border to the eastern terminus of the rail segment.

We have studied the project description, other records, and documents available to us. The activity described, increased rail activity along an existing track, is not regulated under the provisions of either Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act and a Department of the Army permit will not be required. This determination was made because no excavation will occur in and no fill material will be placed into waters of the United States nor will any structures be placed in navigable waters of the United States. Some individual actions that may result from the increased usage, such as construction access, maintenance of certain structures, or stream crossings may require permits.

Should you have any questions, please feel free to write or call me at (915) 568-1359.

Sincerely,

Daniel Malanchuk
Chief, El Paso Regulatory Office

0448

Zero Accidents
Zero Tolerance

CEMRK-OD-P

21 January 1992

INFORMATION SHEET

Kansas City District, Corps of Engineers

Department of the Army Permit Program

STATE OF KANSAS

GENERAL INFORMATION

In addition to obtaining Corps of Engineers authorization, you also may need a permit from the Division of Water Resources, Kansas State Board of Agriculture. In order to determine if you will need this permit, please contact:

Division of Water Resources
Kansas State Board of Agriculture
901 South Kansas Avenue, Second Floor
Topeka, Kansas 66612-1283

Please request that a copy of their determination be sent to the Corps of Engineers. Also, you should furnish the Corps of Engineers a copy of the letter from you to the Division of Water Resources requesting the permit determination.

In addition, you should contact the Kansas Department of Wildlife and Parks, Route 2, Box 54A, Pratt, Kansas for a determination of whether a permit will be required in accordance with Kansas Statutes regarding projects affecting the habitat of Kansas listed threatened and endangered species.

PERMIT FEES

In accordance with the provisions of Federal regulations 33 CFR 320-330, all applicants are required to pay a fee for all permit for activities in waters of the United States. This fee must be paid prior to the issuance of a permit. However, the fee SHOULD NOT be submitted with the enclosed application. When the permit review has been completed and a determination has been made that the permit will be issued, applicants will be notified by mail to submit the fee to the Corps office.

DEFINITION OF FEES:

a. Commercial. A fee of $100 will be charged when the planned or ultimate purpose of the project is commercial or industrial in nature and is in support of operations that charge for the production, distribution, or sale of goods or services.

b. Noncommercial. A $10 fee will be charged for a permit application when the work is noncommercial in nature and provides personal benefits that have no connection with commercial enterprise.

REMEMBER

DO NOT SEND A FEE ALONG WITH YOUR APPLICATION

NOTE: It is no longer necessary to furnish a separate application to the Kansas Department of Health and Environment for State Water Quality Certification.

United States
Department of
Agriculture

Natural Resources
Conservation
Service

P.O. Box 1015
Byers, CO 80103
303-822-5242

October 27, 1995

Julie Donsky, Environmental Scientist
Dames & Moore
One Continental Towers
1701 Golf Road, Ste. 1000
Rolling Meadows, IL 60008

Dear Ms. Donsky;

After reviewing the merger plans of the Union Pacific and Southern Pacific Railroads in regards to a possible increase in rail traffic through Adams and Arapahoe Counties, we have the following results and concerns:

1. There are no protected species that we know of within the five mile radius of the site. For further information regarding endangered species and their habitat, contact the Fish & Wildlife Service at 303-236-7398.

2. Two dry creeks lie within the boundaries set, Comanche Creek and Wolf Creek. Again from our perspective these are not classified as critical habitat.

3. Housing developments, both planned and existing, are within the boundaries along with schools and parks in Bennett, Byers, Deer Trail, and Strasburg. We wonder about safety at crossings for vehicles and children along with the limited number of crossings available in case of emergencies. Finally, what about possible increased noise levels for the residents.

4. Other concerns we have involve the matter of weed control and grass management of the railroad right-of-way.

If you have further questions or need clarification, please contact the Byers NRCS Office at 303-822-5242.

Sincerely,

Eugene H. Backhaus
Resource Conservationist

cc: Lee Hill, ASTC Environmental Quality

United States
Department of
Agriculture

Soil
Conservation
Service

101 South Main Street
Temple, Texas
76501-7682

October 13, 1995

Ms. Julie Donsky
Environmental Scientist
Dames & Moore
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

We have reviewed the general routing of the Colton, California, to El Paso, Texas, segment of the Southern Pacific Railroad's line.

According to the map attached to your letter dated September 26, 1995, the area of interest terminates at El Paso, Texas; therefore, we have no comments on this proposed project.

Thank you for allowing us to review and comment on this project.

Sincerely,

Robert L. Price

FOR

HARRY W. ONETH
State Conservationist

cc: Al Leal, ASC for Field Operations, NRCS, Pecos
Charles R. Terrell, Natl. Env. Coord., Washington, D.C.

STATE OF CALIFORNIA — ENVIRONMENTAL PROTECTION AGENCY

PETE WILSON, Governor

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

Region 4
245 West Broadway, Suite 425
Long Beach, CA 90802-4444

October10, 1995

Ms. Julie Donsky
Environmental Scientist
Dames & Moore
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

REQUESTED INFORMATION WITH RESPECT TO THE MERGER OF UNION PACIFIC AND SOUTHERN PACIFIC RAILROADS

On October 3, 1995, the U.S. EPA, Region IX forwarded your letter dated September 26, 1995 to the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) for comments. Your letter stated that an environmental report is proposed for the merger of Union Pacific and Southern Pacific railroads, and requested comments regarding concerns which may arise because of constructions and/or increase in rail activities between Colton, California and El Paso, Texas. Your letter also requested information regarding the environmental settings of the specified region effected by the merger.

DTSC, unfortunately, does not have the requested information regarding listing of critical habitats, protected species within 5 miles of the proposed project, or locations of parks and refuges in proximity of the proposed project. DTSC advises you to contact the California Department of Fish and Games at (916) 653-7664 as a possible source for these information within the State of California.

Since railroad construction, expansion or increase in rail activities in general are not related to hazardous waste management, a permit is not required by the DTSC. Our authorized responsibility is mainly to oversee and govern the handling and management of hazardous waste at storage, treatment, or disposal facilities. However, we are a responsible agency in accordance with the California Environmental Quality Act and will review environmental impact reports for projects which may have an adverse impact on human health or the environment. We request that you maintain the DTSC as a reviewing agency for the proposed environmental impact report and notify us immediately if the proposed project will involve the management or handling of hazardous waste.

If you have any questions regarding this matter, please feel free to contact Mr. Aaron Yue at (310) 590-4897.

Sincerely,

Robert M. Senga,
Unit Chief
Facility Permitting Branch

cc: Ms. Carmen Santos
U.S. Environmental Protection Agency
Region IX, H-3-1
75 Hawthorne Street
San Francisco, California 94105

Mr. Mohinder S. Sandhu, P.E., Chief
Facility Permitting Branch
Region 4
Department of Toxic Substances Control
245 West Broadway, Suite 350
Long Beach, California 90802

Ms. Pam Bennett, Director
San Bernardino County
Department of Environmental Health
385 North Arrowhead Avenue
San Bernardino, California 92415

Mr. John Fanning, Director
Riverside County Department of Health
Hazardous Material Management Program
4065 County Circle Drive
P.O. Box 7600
Riverside, California 92513-7600

Mr. Thomas L. Wolf, Director
Division of Environmental Health Services
Imperial County
939 Main Street
El Centro, California 92243

Ms. Valerie Vilmer, Director
Planning Department
San Bernardino County
385 North Arrowhead Avenue
San Bernardino, California 92415-0182

cc: Ms. Aleta Laurence, Director
Planning Department
Riverside County
4080 Lemon Street, 9th Floor
Riverside, California 92501

Mr. Jurg Heuberger, Director
Planning Department
Imperial County
939 Main Street
El Centro, California 92243

California Environmental Protection Agency

State of California
Pete Wilson, Governor

OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT

October 16, 1995

Dames & Moore
Julie Donsky, Environmental Scientist
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

Gerald Johnston of the California Protection Agency forwarded a copy of your letter of September 26, 1995, concerning a Public Records Act request one section of Southern Pacific Rail Line, Colton California to El Paso Texas. The Office of Environmental Health Hazard Assessment has not been involved in any activities concerning this track section and, therefore, has no documents, correspondence, memoranda, or reports on the subjects listed in your letter.

If you have any questions, please call me at (916) 324-2829.

Sincerely,

David M. Siegel, Ph.D., D.A.B.T, Chief
Hazardous Waste Toxicology Section

cc: William F. SooHoo
Chief Counsel

601 North 7th Street, MS-241 • P.O. Box 942732 • Sacramento, CA 94234-7320 • (916) 324-7572

California Environmental Protection Agency
James M. Strock, *Secretary for Environmental Protection*

State of California
Pete Wilson, *Governor*

DEPARTMENT OF PESTICIDE REGULATION
James W. Wells, *Director*
1020 N Street, Room 100
Sacramento California 95814

October 26, 1995

Ms. Julie Donsky
Dames & Moore
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

Re: Your Letter of 10/4/95; Public Records Act Request

Dear Ms. Donsky:

I am in receipt of your requests for documents under the California Public Records Act (Government Code §6250, et. seq.), which have been forwarded to me from our parent agency -- the California Environmental Protection Agency (Cal-EPA). All requests for public records made to Cal-EPA are forwarded to each of the individual Departments for review. Because of this, many of the requests we receive are not applicable to any documents which we maintain.

The information you have requested does not appear directed toward any records that may be maintained by the Department of Pesticide Regulation, as we do not compile records relating to any specific "sites."

If you are requesting any documents which you believe may be maintained by this Department, please specify the type of document so that we may process your request.

If I do not receive a response to this letter by November 21, 1995 will assume your request does not pertain to any records involving pesticides.

If you have any questions, please feel free to contact me.

Sincerely,

William J. Lenkeit
Staff Counsel (916) 324-2666

STATE OF CALIFORNIA

AIR RESOURCES BOARD
2020 L STREET
P.O. BOX 2815
SACRAMENTO, CA 95812

PETE WILSON, Governor

October 30, 1995

Dames & Moore
Julie Donsky
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, IL 60008

Dear Ms. Donsky:

RE: Public Records Act Requests

We have received and reviewed your recent Public Records Act requests. It has been determined that the Air Resources Board does not have the information on Union Pacific and Southern Pacific Railroads that you are requesting.

Sincerely,

Jerry Martin
Information Officer

PERSONAL COMMUNICATIONS

RAIL SEGMENTS

RAIL SEGMENTS

PERSONAL COMMUNICATIONS

STATE

NEW MEXICO

Finelly, Robert, New Mexico State Park and Recreation Division, October 31, 1995. Personal communication regardingvarious abandonment projects. It was noted that no environmental concerns which would be affected by the projects proposed.

OREGON

Kelly, Mike, Dames & Moore, October 30, 1995. Personal communication regarding a record search. It was noted that a record search at Oregon SHPO was completed. One problem encountered was that there is no way to check for historic structures within a specific area because they are not mapped. The only way to know for sure is to physically check the areas of concern.

SECTION A-4

RAIL YARDS

SAMPLE LETTER TO AGENCIES

RAIL YARDS

November 9, 1995

Mr. Mike Chiratti
Chief Projects Analyst
Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814

Dear Mr. Chiratti:

Dames & Moore is preparing the Environmental Report for the application for merger of the Union Pacific and Southern Pacific Railroads. The attached list and maps show rail yards, identified within your state, which may see an increase in rail activity (increase in the number of trains per day). In some states there will also be rail segments and intermodal and automotive facilities which will be affected by the proposed merger. We will advise you if and when they are identified in your state.

To prepare our Environmental Report, we are requesting that you inform us of any concerns you have and provide information regarding:

- protected species information (State; Federal) within 5 miles of each site.
- listing of critical habitats within 5 miles of each site.
- locations of parks and refuges in proximity to the proposed projects.
- citations to any permitting/approval authority which you believe your state has over the actions identified.
- any other information you would like to provide regarding environmental matters or local concerns at these sites.

We would appreciate receiving the requested information at your earliest convenience. We would further appreciate it if the information could be supplied in writing or orally to the undersigned at ~~the~~ address and phone/fax numbers on this letterhead. The railroads will be filing our Environmental Report with their application to the Interstate Commerce Commission ("ICC") on or before December, and thus your prompt reply will ensure that our report, which the ICC will consider in preparing its own environmental assessment of the above-described project, includes consideration of your views.

We very much appreciate your assistance.

Very truly yours,
DAMES & MOORE, INC.

Julie Donsky
Environmental Scientist

CONTACT LIST

RAIL YARDS

FEDERAL

U.S. ARMY CORPS OF ENGINEERS

U.S. Army Engineer District, Little Rock
P.O. Box 867
700 W. Capital
Little Rock, AR 72203-0867

U.S. Army Engineer Division,
South Pacific
630 Sansome Street, Room 720
San Francisco, CA 94111-2206

U.S. Army Engineer District, Los Angeles
P.O. Box 2711
Los Angeles, CA 90053-2325

U.S. Army Engineer District, Sacramento
1325 "J" Street
Sacramento, CA 95814-2922

U.S. Army Engineer District,
San Francisco
211 Main Street
San Francisco, CA 94105-1905

U.S. Army Engineer Division,
North Central
111 N. Canal Street
Chicago, IL 60606-7206

U.S. Army Engineer District, Chicago
111 N. Canal Street - Suite 600
Chicago, IL 60606-7206

U.S. Army Engineer District, Rock Island
P.O. Box 2004
Rock Island, IL 61204-2004

U.S. Army Engineer District, New Orleans
P.O. Box 60267
New Orleans, LA 70160-0267

U.S. Army Engineer Division,
Lower Miss Valley
P.O. Box 80
1400 Walnut Street
Vicksburg, MS 39181-0080

U.S. Army Engineer District, Vicksburg
3515 I-20 - Frontage Road
Vicksburg, MS 39180-5191

U.S. Army Engineer District, St. Louis
Regulatory Branch
1222 Spruce Street
St. Louis, MO 63103-2833

U.S. Army Engineer District, Kansas City
700 Federal Building
Kansas City, MO 64106-2896

U.S. Army Engineer Division,
Missouri River
P.O. Box 103, Downtown Station
Omaha, NE 68101-0103

U.S. Army Engineer District, Albuquerque
P.O. Box 1580
Albuquerque, NM 87103-1580

U.S. Army Engineer Division, Ohio River
P.O. Box 1159
Cincinnati, OH 45201-1159

U.S. Army Engineer District, Tulsa
1645 S. 101st East Avenue
Tulsa, OK 74128

U.S. Army Engineer District, Portland
P.O. Box 2946
Portland, OR 97208-2946

U.S. Army Engineer Division,
North Pacific
P.O. Box 2870
Portland, OR 97208-2870

U.S. Army Engineer Division,
Southwestern
1114 Commerce Street
Dallas, TX 75242-0216

U.S. Army Engineer District, Fort Worth
P.O. Box 17300
Fort Worth, TX 76102-0300

U.S. Army Engineer District, Galveston
P.O. Box 1229
Galveston, TX 77553-1229

U.S. Army Engineer District, Seattle
P.O. Box 3755
Seattle, WA 98124-2255

U.S. Army Engineer District, Walla Walla
Bldg. 602, City-County Airport
Walla Walla, WA 99362-9265

U.S. FISH AND WILDLIFE

Region 1
911 N.E. 11th Avenue
Portland, OR 97232-4181

Region 2
P.O. Box 1306
500 Gold Avenue, SW - Room 4000
Albuquerque, NM 87102

Region 3
One Federal Drive
Federal Building
Fort Snelling, MN 55111

Region 4
Richard B. Russell Federal Building
1875 Century Blvd., Rm. 1200, Ste. 200
Atlanta, GA 30345

Region 6
P.O. Box 25486
Denver Federal Center
Denver, CO 80225

U.S. ENVIRONMENTAL PROTECTION AGENCY REGIONAL OFFICES

USEPA
Region 5
77 West Jackson Blvd.
Chicago, IL 60604

USEPA
Region 6
First Interstate Bank Tower
at Fountain Place
1445 Ross Avenue, 12th Floor,
Suite 1200
Dallas, TX 75202

USEPA
Region 7
726 Minnesota Avenue
Kansas City, KS 66101

USEPA
Region 8
999 18th Street, Suite 500
Denver, CO 80202-2466

USEPA
Region 9
75 Hawthorne Street
San Francisco, CA 94105

USEPA
Region 10
1200 Sixth Avenue
Seattle, WA 98101

BUREAU OF INDIAN AFFAIRS

Walter Mills
Area Director
Bureau of Indian Affairs
P.O. Box 10
Phoenix, AZ 85001

Ronald M. Jaeger
Area Director
Bureau of Indian Affairs
2800 Cottage Way
Sacramento, CA 95825-1846

Patrick A. Hayes
Area Director
Bureau of Indian Affairs
P.O. Box 26567
Albuquerque, NM 87125-6567

L.W. Bill Collier
Area Director
Bureau of Indian Affairs
W.C.D. Office Complex
P.O. Box 368
Anadarko, OK 73005-0368

Stanley Speaks
Area Director
Bureau of Indian Affairs
911 NE 11th Avenue
Portland, OR 97232-4169

Nancy Jemison
Acting Area Director
Bureau of Indian Affairs
3701 N. Fairfax Drive
Mailstop VASQ 260
Arlington, VA 22203

DIRECTOR OF THE NATIONAL PARK SERVICE

Roger Kennedy
Director of National Park Service
Main Interior
1849 C Street NW
Washington, DC 20240

STATE

ARIZONA

Arizona State Clearinghouse
3800 North Central Avenue, 14th Floor
Phoenix, AZ 85012

Department of Environmental Quality
3033 North Central Avenue
Phoenix, AZ 85012

State Conservationist
USDA Soil Conservation Service
3003 North Central Avenue, Suite 800
Phoenix, AZ 85012-2945

Arizona State Parks
1300 West Washington
Phoenix, AZ 85007

Lupe Sanchez
Yuma County Housing Director
8540 W. Highway 95
Somerton, AZ 85350

Tom Rawles
Chairman of the Board - Supervisor
Maricopa County
301 W. Jefferson Street
Phoenix, AZ 85003

Delfina E. Bauch
Santa Cruz County
P.O. Box 1265
Nogales, AZ 85628

CALIFORNIA

Mike Chiratti
Chief Projects Analyst
Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814

Office of Historic Preservation
Department of Parks and Recreation
P.O. Box 942896
Sacramento, CA 94296-0001

Environmental Protection Agency
555 Capitol Mall
Sacramento, CA 95814

State Conservationist
USDA Soil Conservation Service
2121-C Second Avenue
Davis, CA 95616-5475

Mark Delaplaine
California Coastal Commission
45 Fremont Street, Ste. 2000
San Francisco, CA 94105-2219

George Barber
Chairman of the Board of Supervisors
San Joaquin Courthouse, Room 701
Stockton, CA 95202

Ron Liehau
Chairman of the Board of Supervisors
Placer County
175 Fulweiler Avenue
Auburn, CA 95603

Marsha Turoci
Chairperson of the Board
San Bernardino County
385 N. Arrowshead Avenue
San Bernardino, CA 92415-0110

Contra Costa County
P.O. Box 911
Martinez, CA 94553

Sally Reed, Chief Administrative Officer
Los Angeles County
500 W. Temple St.
Los Angeles, CA 90012

Richard Inman
Board of Supervisors - Administration
Imperial County
940 Main Street, #208
El Centro, CA 92243

Patrick O'Connell
Alameda County
1221 Oak St.
Oakland, CA 94612

Linda Terra
Solano County
580 Texas Street
Fairfield, CA 94533

COLORADO

State Single Point of Contact
State Clearinghouse
Division of Local Government
1313 Sherman Street, Room 521
Denver, CO 80203

Bill Vidal
Executive Director
Colorado Department of Transportation
4201 E. Arkansas Avenue, #262
Denver, CO 80222

Colorado Historical Society
1300 Broadway
Denver, CO 80203

Dick Norman
Colorado Division of Wildlife
6060 Broadway
Denver, CO 80216

Stewart Macdonald
State Parks
1313 Sherman Street, Room 618
Denver, CO 80203

Elaine Valente
Chairperson
Adams County
450 S. 4th Street
Brighton, CO 80601

Dale Hall
Chairperson
Weld County
P.O. Box 758
Greeley, CO 80632

Board of Commissioners
Mesa County
P.O. Box 20000
Grand Junction, CO 81502-5010

ILLINOIS

Steve Klokkenga
State Single Point of Contact
Office of the Governor, State of Illinois
107 Stratton
Springfield, IL 62706

Don Vonnahme, Director
Department of Transportation
Room 401 - Annex Building
2300 South Dirksen Parkway
Springfield, IL 62764

Illinois Historic Preservation Agency
1 Old State Capitol Plaza
Springfield, IL 62701-1512

Environmental Protection Agency
P.O. Box 19276
Springfield, IL 62794

State Conservationist
USDA Soil Conservation Service
1902 Fox Drive
Champaign, IL 61820

Ralph Johnnie
President of the Board
Marion County
P.O. Box 637
Salem, IL 62881

Cook County Clerks Office
118 N. Clark
Chicago, IL 60602-13

KANSAS

Department of Transportation
Room 800 N
Docking State Office Bldg.
Topeka, KS 66612

Kansas Corporation Commission
1500 SW Arrowhead Road
Topeka, KS 66604

Kansas State Historical Society
120 West 10th Street
Topeka, KS 66612

Department of Health and Environment
Division of Environment
Landon State Office Building
901 S.W. Jackson Street
Topeka, KS 66612

George Schlesener
Chairman
Dickinson County
Court Abilene
Abilene, KS 67410

LOUISIANA

Dept. of Transportation and Development
P.O. Box 94245
Baton Rouge, LA 70804-9245

Louisiana Public Service Commission
P.O. Box 91154
Baton Rouge, LA 70821-9154

Office of Cultural Development
Dept. of Culture, Recreation and Tourism
P.O. Box 44247
Baton Rouge, LA 70804

Department of Environmental Quality
P.O. Box 44066
Baton Rouge, LA 70804

State Conservationist
USDA Soil Conservation Service
3737 Government Street
Alexandria, LA 71302

Director
Costal Management Division
Department of Natural Resources
P.O. Box 44487
Baton Rouge, LA 70804-4487

Marc McMurry
Parish Administrator
Calcasieu Parish
P.O. Draw 3287
Lake Charles, LA 70602

President Clement Guidroz
Pointe Coupee Police Jury
P.O. Box 290
New Roads, LA 70760

MISSOURI

Lois Pohl, Office of Administration
Federal Assistance Clearinghouse
Division of General Services
P.O. Box 809, Room 760 Truman Bldg.
Jefferson City, MO 65102

Office of Historic Preservation
205 Jefferson
P.O. Box 176
Jefferson City, MO 65102

Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102

State Conservationist
USDA Soil Conservation Service
Parkade Center, Suite 250
601 Business Loop 70 W.
Columbia, MO 65203-2546

Robert Manns
Presiding Commissioner
Butler County
Butler County Courthouse, Room 203
Poplar Bluff, MO 63901

OREGON

Department of Transportation
State Transportation Bldg.
Salem, OR 97310

Oregon Public Utility Commission
300 Labor and Industries Bldg.
Salem, OR 97310

State Parks and Recreation Department
1115 Commercial Street, NE
Salem, OR 97310-1001

Department of Environmental Quality
811 S.W. 6th Avenue
Portland, OR 97204

State Conservationist
USDA Soil Conservation Service
1640 Federal Building
1220 S.W. 3rd Avenue
Portland, OR 97204

Coastal and Ocean
Program Management
Dept. of Land Conservation
and Development
800 N.E. Oregon Street, #18
Portland, OR 97223

Mary Pearmine
Chairperson
Marion County
100 High Street NE
Salem, OR 97301

Board of Commissioners
Umatilla County
216 S.E. 4th Street
Pendleton, OR 97801

Board of Commissioners
Deschutes County
1130 N.W. Harriman
Bend, OR 97701

TEXAS

Tom Adams
Governor's Office of Budget and Planning
P.O. Box 12428
Austin, TX 78711

Texas Historical Commission
P.O. Box 12276, Capitol Station
Austin, TX 78711

Environmental Protection Division
P.O. Box 12548
Austin, TX 78711-2548

State Conservationist
USDA Soil Conservation Service
Poage Federal Building
101 S. Main Street
Temple, TX 76501-7682

Dan Pearson, Executive Director
Natural Resources Conservation
Commission
12100 Park 35 Circle
P.O. Box 13087
Austin, TX 78711-3087

Andrew Sansom
Executive Director
Parks and Wildlife Commission
4300 Smith School Road
Austin, TX 78744

Mark Sweeney
East Texas Council of Governments
3800 Stone Road
Kilgore, TX 75662

Honorable Judge Jim Lewis
McLennen County
P.O. Box 1728
Waco, TX 76703

Honorable Judge Arthur Ware
Potter County
500 S. Filmore
Amarillo, TX 79101

Honorable Judge Charles W. Mattox
El Paso County
500 E. San Antonio, Ste. 301
County Courthouse
El Paso, TX 79901

Honorable Judge Tom Vandergriff
Tarrant County
100 E. Watherford
Fort Worth, TX 76196-0101

WASHINGTON

Department of Transportation
Transportation Building
NS-KF-01
Olympia, WA 98504

Washington Utilities and
Tptn. Commission
1300 South Evergreen Park Drive, SW
Olympia, WA 98504

Office of Archeology and
Historic Preservation
111 W. 21st Avenue, KL-11
Olympia, WA 98504

Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

State Conservationist
USDA Soil Conservation Service
Rock Pointe Tower II
316 Boone Avenue, Suite 450
Spokane, WA 99201-2348

Program Manager
Shorelands and Costal Zone Mgt.
Program
Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

King County Clerks Office
516 3rd Seattle
Seattle, WA 98028

AGENCY RESPONSES

RAIL YARDS

NO AGENCY RESPONSES RECEIVED TO DATE.

SECTION A-5

INTERMODAL AND AUTOMOTIVE FACILITIES

SAMPLE LETTER TO AGENCIES

INTERMODAL AND AUTOMOTIVE FACILITIES

November 9, 1995

Mr. Mike Chiratti
Chief Projects Analyst
Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814

Dear Mr. Chiratti:

Dames & Moore is preparing the Environmental Report for the application for merger of the Union Pacific and Southern Pacific Railroads. The attached list and maps show intermodal and automotive facilities, identified within your state, which may see an increase in truck activity (increase in the number of trucks entering and leaving the facility per day). In some states there will also be rail segments and rail yards which will be affected by the proposed merger. We will advise you if and when they are identified in your state.

To prepare our Environmental Report, we are requesting that you inform us of any concerns you have and provide information regarding:

- protected species information (State; Federal) within 5 miles of each site.
- listing of critical habitats within 5 miles of each site.
- locations of parks and refuges in proximity to the proposed projects.
- citations to any permitting/approval authority which you believe your state has over the actions identified.
- any other information you would like to provide regarding environmental matters or local concerns at these sites.

We would appreciate receiving the requested information at your earliest convenience. We would further appreciate it if the information could be supplied in writing or orally to the undersigned at the address and phone/fax numbers on this letterhead. The railroads will be filing our Environmental Report with their application to the Interstate Commerce Commission ("ICC") on or before December, and thus your prompt reply will ensure that our report, which the ICC will consider in preparing its own environmental assessment of the above-described project, includes consideration of your views.

We very much appreciate your assistance.

Very truly yours,
DAMES & MOORE, INC.

Julie Donsky

Environmental Scientist

CONTACT LIST

INTERMODAL AND AUTOMOTIVE FACILITIES

FEDERAL

U.S. ARMY CORPS OF ENGINEERS

U.S. Army Engineer Division,
South Pacific
630 Sansome Street, Room 720
San Francisco, CA 94111-2206

U.S. Army Engineer District, Los Angeles
P.O. Box 2711
Los Angeles, CA 90053-2325

U.S. Army Engineer District, Sacramento
Attention: Mary Corrasa
1325 "J" Street
Sacramento, CA 95814-2922

U.S. Army Engineer District,
San Francisco
211 Main Street
San Francisco, CA 94105-1905

U.S. Army Engineer Division District,
North Central
111 N. Canal Street
Chicago, IL 60606-7206

U.S. Army Engineer District, Chicago
111 N. Canal Street, Ste 600
Chicago, IL 60606-7206

U.S. Army Engineer District, Rock Island
P.O. Box 2004
Rock Island, IL 61204-2004

U.S. Army Engineer Division,
Lower Miss Valley
P.O. Box 80
1400 Walnut Street
Vicksburg, MS 39181-0080

U.S. Army Engineer District, Kansas City
700 Federal Building
Kansas City, MO 64106-2896

U.S. Army Engineer District,
Missouri River
P.O. Box 103, Downtown Station
Omaha, NE 68101-0103

U.S. Army Engineer District, Portland
P.O. Box 2946
Portland, OR 97208-2946

U.S. Army Engineer Division,
North Pacific
P.O. Box 2870
Portland, OR 97208-2870

U.S. Army Engineer District, Memphis
B-202 Federal Building
167 N. Main Street
Memphis, TN 38103-1894

U.S. Army Engineer Division,
Southwestern
1114 Commerce Street
Dallas, TX 75242-0216

U. S. Army Engineer District, Fort Worth
Planning Department
P.O. Box 17300
Fort Worth, TX 76102-0300

U.S. Army Engineer District, Fort Worth
Regulatory Department
P.O. Box 17300
Ft. Worth, TX 76102-0300

U.S. Army Engineer District, Galveston
Planning Department
P.O. Box 1229
Galveston, TX 77553-1229

U.S. Army Engineer District, Galveston
Regulatory Department
P.O. Box 1229
Galveston, TX 77553-1229

U.S. Army Engineer District, Seattle
P.O. Box 3755
Seattle, WA 98124-2255

U.S. Army Engineer District, Walla Walla
Bldg. 602, City-County Airport
Walla Walla, WA 99362-9265

U.S. FISH AND WILDLIFE

U.S. FISH AND WILDLIFE SERVICE
Region 1
911 N.E. 11th Ave.
Portland, OR 97232-4181

U.S. FISH AND WILDLIFE SERVICE
Region 2
P.O. Box 1306
500 Gold Avenue, SW - Room 4000
Albuquerque, NM 87102

U.S. FISH AND WILDLIFE SERVICE
Region 3
One Federal Drive
Federal Building
Fort Snelling, MN 55111

U.S. FISH AND WILDLIFE SERVICE
Region 4
Richard B. Russell Federal Bdg., Rm. 1200
1875 Century Blvd., Ste 200
Atlanta, GA 30345

U.S. FISH AND WILDLIFE SERVICE
Region 6
P.O. Box 25486
Denver Federal Center
Denver, CO 80225

U.S. ENVIRONMENTAL PROTECTION AGENCY REGIONAL OFFICES

USEPA
Region 5
77 West Jackson Blvd.
Chicago, IL 60604

USEPA
Region 6
1st Interstate Bank Tower
at Fountain Place
1445 Ross Avenue, 12th Floor, Ste 1200
Dallas, TX 75202

USEPA
Region 7
726 Minnesota Ave.
Kansas City, KS 66101

USEPA
Region 8
999 18th St, Ste 500
Denver, CO 80202-2466

USEPA
Region 9
75 Hawthorne Street
San Francisco, CA 94105

USEPA
Region 10
1200 Sixth Ave.
Seattle, WA 98101

BUREAU OF INDIAN AFFAIRS

Walter Mills, Area Director
Bureau of Indian Affairs
P.O. Box 10
Phoenix, AZ 85001

Ronald M. Jaeger, Area Director
Bureau of Indian Affairs
2800 Cottage Way
Sacramento, CA 95825-1846

Patrick A. Hayes, Area Director
Bureau of Indian Affairs
P.O. Box 26567
Albuquerque, NM 87125-6567

Wilson Barber, Area Director
Bureau of Indian Affairs
P.O. Box 1060
Gallup, NM 87305

L.W. Bill Collier, Area Director
Bureau of Indian Affairs
W.C.D. Office Complex
P.O. Box 368
Anadarko, OK 73005-0368

Stanley Speaks, Area Director
Bureau of Indian Affairs
911 NE 11th Avenue
Portland, OR 97232-4169

Nancy Jemison, Acting Area Director
Bureau of Indian Affairs
3701 N. Fairfax Drive
Mailstop vASQ 260
Arlington, VA 22203

DIRECTOR OF THE NATIONAL PARK SERVICE

Roger Kennedy
Director of National Park Service
Main Interior
1849 C Street NW
Washington, DC 20240

STATE

ARIZONA

Arizona State Clearinghouse
3800 N. Central Avenue, 14th Floor
Phoenix, AZ 85012

Arizona State Parks
1300 West Washington
Phoenix, AZ 85007

Department of Environmental Quality
3033 North Central Avenue
Phoenix, AZ 85012

State Conservationist
USDA Soil Conservation Service
3003 N. Central Avenue, Suite 800
Phoenix, AZ 85012-2945

Tom Rawles, Chairman of the Board-Supervisor
Maricopa County
301 W. Jefferson Street
Phoenix, AZ 85003

ARKANSAS

Joseph Gillesbie, Mgr. State Clearinghouse
Office of Intergovernmental Service
Department of Finance and Administration
P.O. Box 3278
Little Rock, AR 72203

Department of Arkansas Heritage
Arkansas Historic Preservation Program
The Heritage Center
323 Center Street, Ste 1500
Little Rock, AR 72201

Department of Pollution Control and Ecology
P.O. Box 9583
Little Rock, AR 72219

State Conservationist
USDA Soil Conservation Service
5404 Federal Building
700 W. Capitol Avenue
Little Rock, AR

The Honorable Judge Brian Williams
Crittenden County
Crittenden County Courthouse
Marion, AR 72364

CALIFORNIA

Mike Chiratti
Chief Projects Analyst
Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814

Office of Historic Preservation
Department of Parks and Recreation
P.O. Box 942896
Sacramento, CA 94296-0001

Environmental Protection Agency
555 Capitol Mall
Sacramento, CA 95814

State Conservationist
USDA Soil Conservation Service
2121-C Second Avenue
Davis, CA 95616-5475

Mark Delaplaine
California Coastal Commission
45 Fremont Street, Ste 2000
San Francisco, CA 94105-2219

Sally Reed, Chief Administrative Officer
Los Angeles County
500 W. Temple St.
Los Angeles, CA 90012

Patrick O'Connell
Alameda County
1221 Oak St.
Oakland, CA 94612

George Barber
Chairman of the Board of Supervisors
San Joaquin Courthouse, Room 701
Stockton, CA 95202

Marsha Turoci, Chairperson of the Board
San Bernardino County
385 N. Arrowshead Avenue
San Bernardino, CA 92415-0110

Ron Liehau, Chairman of the Board
of Supervisors
Placer County
175 Fulweiler Avenue
Auburn, CA 95603

Chairman of the Board of Supervisors
Sacramento County
P.O. Box 839
Sacramento, CA 95812-0839

COLORADO

State Single Point of Contact
State Clearinghouse
Division of Local Government
1313 Sherman Street, Room 521
Denver, CO 80203

Bill Vidal
Executive Director
Colorado Department of Transportation
4201 E. Arkansas Avenue #262
Denver, CO 80222

Colorado Historical Society
1300 Broadway
Denver, CO 80203

Department of Natural Resources
1313 Sherman Street, Room 718
Denver, CO 80203-3528

State Conservationist
USDA Soil Conservation Service
655 Parfet Street, E200C
Lakewood, CO 80215-5517

Dick Norman
Colorado Division of Wildlife
6060 Broadway
Denver, CO 80216

Stewart Macdonald
State Parks
1313 Sherman Street, Room 618
Denver, CO 80203

Mayor's Office
Denver County
City & County Building
1437 Bannock, Room 350
Denver, CO 80202

ILLINOIS

Steve Klokkenga
State Single Point of Contact
Office of the Governor, State of Illinois
107 Stratton
Springfield, IL 62706

Don Vonnahme, Director
Department of Transportation
Room 401 - Annex Building
2300 South Dirksen Parkway
Springfield, IL 62764

Illinois Historic Preservation Agency
1 Old State Capitol Plaza
Springfield, IL 62701-1512

Environmental Protection Agency
P.O. Box 19276
Springfield, IL 62794

State Conservationist
USDA Soil Conservation Service
1902 Fox Drive
Champaign, IL 61820

Cook County Clerks Office
118 N. Clark
Chicago, IL 60602-13

KANSAS

Dept. of Transportation
Room 800 N
Docking State Office Bldg.
Topeka, KS 66612

Kansas Corporation Commission
1500 SW Arrowhead Road
Topeka, KS 66604

Kansas State Historical Society
120 West 10th Street
Topeka, KS 66612

Department of Health and Environment
Division of Environment
Landon State Office Building
901 S.W. Jackson Street
Topeka, KS 66612

State Conservationist
USDA Soil Conservation Service
760 South Broadway
Salina, KS 67401

Steve Williams
Kansas Department of Wildlife & Parks
900 SW Jackson
Topeka, KS 66603

Nancy Burns
Chairperson of the Board
Wyandotte County
710 N. 7th St., 2nd Fl.
Kansas City, KS 66101

OREGON

Dept. Of Transportation
State Transportation Bldg.
Salem, OR 97310

Oregon Public Utility Commission
300 Labor and Industries Bldg.
Salem, OR 97310

Department of Environmental Quality
811 S.W. 6th Avenue
Portland, OR 97204

State Conservationist
USDA Soil Conservation Service
1640 Federal Building
1220 S.W. 3rd Avenue
Portland, OR 97204

Coastal and Ocean
Program Management
Dept. of Land Conservation
and Development
800 N.E. Oregon Street #18
Portland, OR 97223

State Parks and Recreation Department
1115 Commercial Street, NE
Salem, OR 97310-1001

Betsy Williams
Dir. of Dept. of Environmental Srvs.
Multnomah County
2115 SE Morrison
Portland, OR 97214

TEXAS

Tom Adams
Governor's Office of Budget and Planning
P.O. Box 12428
Austin, TX 78711

Texas Historical Commission
P.O. Box 12276, Capitol Station
Austin, TX 78711

Environmental Protection Division
P.O. Box 12548
Austin, TX 78711-2548

State Conservationist
USDA Soil Conservation Service
Poage Federal Building
101 S. Main Street
Temple, TX 76501-7682

Andrew Sansom
Executive Director
Parks and Wildlife Commission
4300 Smith School Road
Austin, TX 78744

Dan Pearson, Executive Director
Natural Resources Conservation
Commission
12100 Park 35 Circle
P.O. Box 13087
Austin, TX 78711-3087

Earl Bullock
Dallas County Clerk
509 Main Street
Dallas, TX 75202

Gerry Rickhofs
Bexer County Clerk
Bexer County Courthouse
100 Dolorosa, Suite 108
San Antonio, TX 78205-3083

Mark Sweeney
East Texas Council of Governments
3800 Stone Road
Kilgore, TX 75662

WASHINGTON

Department of Transportation
Transportation Bldg. NS-KF-01
Olympia, WA 98504

Washington Utilities and
Tptn. Commission
1300 South Evergreen Park Drive, SW
Olympia, WA 98504

Office of Archeology and
Historic Preservation
111 W. 21st Avenue, KL-11
Olympia, WA 98504

Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

State Conservationist
USDA Soil Conservation Service
Rock Pointe Tower II
316 Boone Avenue, Suite 450
Spokane, WA 99201-2348

Program Manager
Shorelands and Coastal Zone
Mgt. Program
Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

King County Clerks Office
516 3rd Seattle
Seattle, WA 98028

AGENCY RESPONSES

INTERMODAL AND AUTOMOTIVE FACILITIES

NO AGENCY RESPONSES RECEIVED TO DATE.

SECTION B

AIR QUALITY METHODOLOGY AND CALCULATIONS

AIR QUALITY METHODOLOGY AND CALCULATIONS

RAIL SEGMENTS

Operating data provided by UP/SP indicate that various rail line segments are expected to experience an increase in activity equal to or greater than the ICC thresholds of 8 trains/day or 100% of gross ton miles (as measured annually) in attainment areas, and 3 trains/day or 50% of gross ton miles in non-attainment areas (as measured annually). Air pollutant emission increases have been calculated for each Air Quality Control Region (AQCR) which includes a line segment.

The change in emissions for each rail line segment was calculated using the total gross ton increase expected on the segment and the length of each segment, as presented in Part 2. These values, when multiplied together, provide the gross ton mile increase for a particular rail line segment. Next, the total gallons of diesel fuel consumed for each segment were obtained by dividing this value by the fuel efficiency factor, as calculated for the combined system (i.e., 628 gross ton miles per gallon for an average diesel locomotive). The annual emission increases were estimated by multiplying the annual fuel consumption by emission factors. The emission factors for diesel powered locomotives (presented below) were provided by UP/SP and are based on the Booz, Allen, and Hamilton locomotive emission study. Locomotive emission factors (pounds per 1,000 gallons of diesel fuel consumed) are presented below:

Hydrocarbons (HC)	22
Carbon Monoxide (CO)	68.4
Nitrogen Oxides (NO_x)	512
Sulfur Oxides (SO_x)	37.1
Particulate Matter (PM)	11.1

Calculated emissions are reported in tons of a given pollutant per year.

Each rail line segment travels through one or more AQCRs. The portion of track that lies within a particular AQCR was identified as a percentage of the total rail line segment length. The increase in emissions of a given pollutant from the entire rail line segment was multiplied by the appropriate percentage in order to determine the increase in emissions in a particular AQCR.

This methodology was employed for all pollutants of concern on every rail line segment that will experience an increase in activity equal to or greater than the thresholds discussed previously.

The following sample calculation for a sample rail line segment illustrates the emission estimation procedure:

$$[700\ miles\ (segment\ length)] \times \left[\frac{13.9 \times 10^6\ gross\ tons\ (increase)}{year}\right] \times$$

$$\left[\frac{gallon}{628\ gross\ ton\ miles}\right] = 15{,}493{,}631\ \frac{gallons}{year}$$

$$\left[15{,}493{,}631\ \frac{gallons}{year}\right] \times \left[\frac{0.022\ lb\ (HC)}{gallon}\right] \times \left[\frac{1\ ton}{2000\ lb}\right] = 170.4\ \frac{tons\ (HC)}{year}$$

RAIL YARDS

Operating data provided by UP/SP indicate that various rail yards which are expected to experience an increase in activity equal to or greater than the ICC thresholds of 100% carload activity in attainment areas and 20% carload activity in non-attainment areas. Air pollutant emission increases have been calculated for each AQCR that include these rail yards.

The increase in emissions for each rail yard was calculated first by dividing the daily increase in railcar activity by the system-wide average railcars switched per shift (i.e. assumed to be 150 railcars/shift). This result was then multiplied by the duration of a typical shift (8 hours) and then annual operation (365 days per year) to yield annual switch engine operating hours. The switch engine (locomotive) operating hours were then multiplied by the hourly diesel fuel consumption of 8.6 gallons per switch engine hour to provide the increase in annual diesel fuel consumption. Finally, the annual emission increases were estimated by multiplying the annual fuel consumption by emission factors. The emission factors for diesel powered locomotives (presented below) were provided by UP/SP and are based on the Booz, Allen, and Hamilton locomotive emission study. Locomotive emission factors (pounds per 1,000 gallons of diesel fuel consumed) are presented below:

Hydrocarbons (HC)	22
Carbon Monoxide (CO)	68.4
Nitrogen Oxides (NO_x)	512
Sulfur Oxides (SO_x)	37.1
Particulate Matter (PM)	11.1

Calculated emissions for each rail yard assessed are reported in tons of a given pollutant per year, as presented in Part 3.

The following sample calculation for the Roseville, California railyard illustrates the emission estimation procedure:

$$\left[584.9\ \frac{railcars\ \ (increase\ )}{day}\right] x \left[\frac{switch\ \ engine\ \ shift}{150\ railcars}\right] x \left[8\ \frac{hours}{shift}\right]$$

$$x \left[365\ \frac{days}{year}\right] x \left[8.6\ \frac{gallons}{hour}\right]$$

$$x \left[\frac{0.512\ \ lb\ \ (NO_x)}{gallon}\right] x \left[\frac{1\ \ ton}{2000\ \ lbs}\right] = \frac{25.1\ \ tons\ \ (NO_x)}{year}$$

INTERMODAL FACILITIES

Operating data provided by UP/SP indicate that various intermodal facilities which are expected to experience an increase in activity equal to or greater than the ICC thresholds of 10% truck traffic or 50 trucks/day for both attainment and non-attainment areas. Note, the assumption that 1.25 lift equates to 1 over-the-road truck was used for this analysis. Air pollutant emission increases have been calculated for each AQCR in which these intermodal facilities are located.

Emission increases from intermodal facilities will be associated with the following general types of sources:

* Over-the-road trucks;
* Lift equipment; and
* Yard trucks.

For over-the-road trucks, the increase in the number of trucks/day was multiplied by the average amount of time a truck is in the facility (assumed to be 35 minutes). The resultant daily truck operating hours was multiplied by 365 operating days per year to determine the annual truck operating hours. Next, the average truck fuel consumption rate (assumed to

be 2 gallons per hour) was multiplied by the annual truck operating hours to determine the annual fuel consumption. Lastly, the annual fuel consumption was multiplied by emission factors for trucks provided in "AP-42," USEPA, 1995. Heavy duty truck emission factors (pounds per 1,000 gallons of diesel fuel consumed) are presented below:

Hydrocarbons (HC)	46
Carbon Monoxide (CO)	215
Nitrogen Oxides (NO_x)	254
Sulfur Oxides (SO_x)	7
Particulate Matter (PM)	45

Calculated emissions are then reported in tons of a given pollutant per year.

The following sample calculation for the over-the-road truck increases at the Roseville, California intermodal facility illustrates the emission estimation procedure:

$$\left[103 \ \frac{trucks \ (increase)}{day}\right] x \left[365 \ \frac{days}{year}\right] x \left[35 \ \frac{minutes}{truck}\right]$$

$$x \left[\frac{1 \ hour}{60 \ minutes}\right] x \left[2.0 \ \frac{gallons}{hour}\right] x \left[0.046 \ \frac{lb \ (HC)}{gallon}\right]$$

$$x \left[\frac{1 \ ton}{2000 \ lb}\right] = 1.01 \ \frac{tons \ (HC)}{year}$$

For purposes of emission estimation, all lift equipment at a facility was grouped and considered either a packer or a crane. The increase in annual fuel consumption was calculated using the total annual increase in units handled, dividing by the packer/crane operating rate of 17 units/hour, and multiplying by the average diesel consumption rate of 5.5 gal/hour. Finally, the annual emission increases were estimated by multiplying the annual fuel consumption by the emission factors for heavy duty trucks listed above.

The following sample calculation for the yard equipment increases at the Roseville, California intermodal yard illustrates the emission estimation procedure:

$$\left[47{,}000\ \frac{units\ (increase)}{year}\right] x \left[\frac{1\ hour}{17\ units}\right] x \left[5.5\ \frac{gallons}{hour}\right] x$$

$$\left[0.254\ \frac{lb\ (NO_x)}{gallon}\right] x \left[\frac{1\ ton}{2000\ lbs}\right] = 1.93\ \frac{ton\ (NO_x)}{year}$$

Emission increases for each intermodal facility assessed are presented in Part 3.

For yard trucks, the increase in annual yard truck operating hours was calculated using the total annual increase in lifts (i.e. assuming 1 unit = 1 lift), dividing by the packer/crane operating rate of 17 lifts per crane/packer operating hour, and multiplying by the assumed ratio of 5 truck operating hours per crane/packer operating hour. The increase in truck operating hours was then multiplied by the average yard truck diesel consumption rate of 4.0 gal/hour. Finally, the annual emission increases were estimated by multiplying the annual fuel consumption by the emission factors for heavy duty trucks listed above.

The following sample calculation for the yard truck increases at the Roseville, California intermodal yard illustrates the emission estimation procedure:

$$\left[47{,}000\ \frac{lifts\ (increase)}{year}\right] x \left[\frac{1\ crane/packer\ hour}{17\ lifts}\right]$$

$$x \left[5\frac{truck\ hours}{crane/packer\ hour}\right] x \left[4.0\ \frac{gallons}{truck\ hour}\right]$$

$$x \left[0.254\ \frac{lb\ (NO_x)}{gallon}\right] x \left[\frac{1\ ton}{2000\ lbs}\right] = 7.02\ \frac{ton\ (NO_x)}{year}$$

Emission increases for each intermodal facility assessed are presented in Part 3.

AUTOMOBILE FACILITIES

Operating data provided by UP/SP indicate that automotive facilities which are expected to experience an increase in activity equal to or greater than the ICC thresholds of 10% truck traffic or 50 trucks/day for both attainment and non-attainment areas. Air pollutant emission increases have been calculated for each AQCR in which these facilities are located.

Emission increases from automotive terminals will be associated with the following general types of sources:

* Over-the-road trucks;
* Automobiles; and
* Portable ramps.

For estimation of emissions from over-the road trucks, the increase in the number of trucks processed at an automotive facility per day was multiplied by the average amount of time a truck is in the facility (assumed to be 60 minutes). The resultant increase in daily truck operating hours was multiplied by 312 operating days per year to determine the annual truck operating hours. Next, the average truck fuel consumption rate (assumed to be 2 gallons per hour) was multiplied by the annual truck operating hours to determine the annual fuel consumption. Lastly, the annual fuel consumption was multiplied by emission factors provided in "AP-42," USEPA, 1995. Heavy duty truck emission factors (pounds per 1,000 gallons of diesel fuel consumed) are presented below:

Hydrocarbons (HC)	46
Carbon Monoxide (CO)	215
Nitrogen Oxides (NO_x)	254

Sulfur Oxides(SO_x)	7
Particulate Matter(PM)	45

Calculated emissions are then reported in tons of a given pollutant per year.

The following sample calculation for the over-the-road truck increases at a sample automotive facility illustrates the emission estimation procedure:

$$\left[75 \frac{trucks}{day}\right] x \left[312 \frac{days}{year}\right] x \left[60 \frac{minutes}{truck}\right] x \left[\frac{1\ hour}{60\ minutes}\right] x$$

$$\left[2.0 \frac{gallons}{hour}\right] x \left[0.046 \frac{lb\ (HC)}{gallon}\right] x \left[\frac{1\ ton}{2000\ lb}\right] = 1.08 \frac{tons\ (HC)}{year}$$

Part 3 presents the emission increases for each automotive terminal assessed.

For estimation of emissions from automobiles, the increase in the number of automobiles moving through an automotive facility per day (i.e. assuming 8.5 automobiles per truck) was multiplied by the average amount of time an automobile engine is running while within a facility (assumed to be 5 minutes). The resultant daily automobile operating hours was multiplied by 312 operating days per year to determine the annual automobile operating hours. Lastly, the annual operating hours was multiplied by emission factors provided in "AP-42," USEPA, 1985. Gasoline engine emission factors (pounds per hour of engine operation assuming 5 miles/hour) are presented below:

Hydrocarbons (HC)	0.0022
Carbon Monoxide (CO)	0.0126
Nitrogen Oxides (NO_x)	0.0058

Calculated emissions are then reported in tons of a given pollutant per year.

The following sample calculation for the automobile increases at a sample automotive facility illustrates the emission estimation procedure:

$$\left[75 \ \frac{trucks \ (increase)}{day}\right] x \left[8.5 \ \frac{automobiles}{truck}\right] x \left[5 \ \frac{minutes}{automobile}\right]$$

$$x \left[312 \ \frac{days}{year}\right] x \left[\frac{1 \ hour}{60 \ minutes}\right] x \left[0.0022 \ \frac{lb \ (HC)}{hour}\right]$$

$$x \left[\frac{1 \ ton}{2000 \ lbs}\right] = 0.018 \ \frac{tons \ (HC)}{year}$$

Part 3 presents the emission increase for each automotive terminal assessed.

For estimation of emissions from portable ramps, it is assumed that the average daily system-wide increase in operating time per ramp is 1 hour/ramp. The increase in annual hours of operation per facility was determined by multiplying the number of portable ramps at the automotive facility by 1 hour/ramp and 312 operating days per year. Lastly, the annual operating hours was multiplied by gasoline engine emission factors provided in "AP-42," USEPA, 1985. Gasoline engine emission factors (pounds per hour of engine operation assuming 5 miles/hour) are presented below:

Hydrocarbons (HC)	0.0022
Carbon Monoxide (CO)	0.0126
Nitrogen Oxides (NO_x)	0.0058

Calculated emissions are then reported in tons of a given pollutant per year.

The following sample calculation for the portable ramp increases at a sample automotive facility illustrates the emission estimation procedure:

$$[5\ portable\ \ ramps\ ] \times \left[1\ \frac{hour}{ramp\text{-}day}\right] \times$$

$$\left[312\ \frac{days}{year}\right] \times \left[0.0022\ \frac{lb\ (HC)}{hour}\right] \times \left[\frac{1\ ton}{2000\ lbs}\right] = 0.0017\ \frac{tons\ (HC)}{year}$$

Part 3 presents the emission increase for each automotive terminal assessed.

ABANDONMENTS

In connection with the proposed 17 rail ine abandonments, a determination was made as to whether railcars diverted to trucks as a result of the abandonment would cause an increase in truck traffic of more than 10 percent of the average daily traffic or 50 vehicles a day on any affected road segment. The largest rail to truck diversions are anticipated to occur at Malta, Colorado where aproximately 2000 trucks could be added to area road segments. Based on a five day per week operation, the increase to vehicular traffic would be fewer than 8 trucks per day, far below 10% of observed road traffic.

AIR QUALITY CONTROL REGIONS

Table B-1 depicts the various Air Quality Control Regions (AQCR) and the attainment status of each. The notation used to describe the attainment status of each AQCR is as follows:

A = Attainment;
NA = Non-attainment;
NAP = Portion of AQCR is designated as non-attainment;
U = Unclassifiable;

CBC = Cannot be classified; and

"-" = No classification exists.

Note, for conservative purposes, if a portion of an AQCR is designated as non-attainment (i.e., NAP), the entire AQCR is considered non-attainment.

REFERENCES

Booz, Allen, Hamilton, Inc., 1991. "Locomotive Emission Study," California Air Resources Board.

United States Environmental Protection Agency, 1995. "Compilation of Air Pollution Emission Factors," Volume 2, January, 1995.

United States Environmental Protection Agency, 1985. "Compilation of Air Pollution Emission Factors," Volume 2, January, 1985.

TABLE B-1

AIR QUALITY CONTROL REGION (AQCR)
ATTAINMENT STATUS
FOR CRITERIA AIR POLLUTANTS

AQCR NO.	AQCR DESIGNATION	POLLUTANTS						
		SO_2	NO_x	TSP	PM_{10}	CO	O_3	Pb
Arizona								
504	Maricopa	A	A	NAP	NAP	NAP	NAP	–
506	Northern Arizona	CBC	A	NAP	U	A	A	–
502	Pima	NAP	A	NAP	NAP	NAP	A	–
505	Central Arizona	NAP	A	NAP	NAP	A	A	–
501	Southeast Arizona	NAP	A	NAP	NAP	A	A	–
503	Mohave-Yuma	A	A	A	NAP	A	A	–
Arkansas								
16	Central Arkansas	A	A	A	–	A	A	–
17	Metropolitan Fort Smith	A	A	A	–	A	A	–
18	Metropolitan Memphis	A	A	A	–	A	A	–
19	Monroe-El Dorado (LA)	A	A	A	–	A	A	–
20	Northeast Arkansas	A	A	A	–	A	A	–
21	Northwest Arkansas	A	A	A	–	A	A	–
22	Shreveport, Texarkana, Tyler (LA,OK,TX)	A	A	A	–	A	A	–
California								
23	Great Basin Valley	–	A	–	NAP	A	A	–
24	Metropolitan Los Angeles (South Coast)	A	NA	NA	NAP	NAP	NAP	–
25	North Central Coast	CBC	A	A	U	A	NA	–
26	North Coast	CBC	A	A	U	A	A	–
27	Northeast Plateau	CBC	A	A	U	A	A	–
28	Sacramento Valley	CBC	A	NAP	NAP	NAP	NAP	–
29	San Diego	A	A	NAP	U	NAP	NA	–
30	San Francisco Bay Area	A	A	NAP	U	NAP	A	–
31	San Joaquin Valley	A	A	NA	NAP	NAP	NA	–
32	South Central Coast	A	A	NAP	U	A	A	–
33	Southeast Desert	A	A	NAP	NAP	A	NAP	–
507	Lake County	–	A	A	U	A	A	–
508	Mountain Counties	CBC	A	A	U	A	NAP	–
509	Lake Tahoe	A	A	A	U	NAP	A	–
Colorado								

NA = Nonattainment (entire AQCR); A = Attainment; NAP = Nonattainment (portion of AQCR);
U = Unclassifiable; CBC = Can't Be Classified

TABLE B-1 (CON'T)

AIR QUALITY CONTROL REGION (AQCR)

AQCR NO.	AQCR DESIGNATION	POLLUTANTS						
		SO_2	NO_x	TSP	PM_{10}	CO	O_3	Pb
34	Comanche	A	A	CBC	NAP	A	A	–
14	Four Corners (NM,UT)	A	A	A	NAP	A	A	–
35	Grand Mesa	A	A	NAP	NAP	A	A	–
36	Metropolitan Denver	A	A	NAP	NAP	NAP	NAP	–
37	Pawnee	A	A	NAP	U	NAP	A	–
38	San Isbel	A	A	NAP	NAP	NAP	A	–
39	San Luis	A	A	A	U	A	A	–
40	Yampa	A	A	CBC	NAP	A	A	–
Idaho								
61	Eastern ID	A	A	NAP	NAP	A	A	–
62	Eastern WA-Northern ID	A	A	NAP	NAP	NAP	A	–
63	Idaho	A	A	A	NAP	A	A	–
64	Metropolitan Boise	A	A	A	NAP	NAP	A	–
Illinois								
65	Burlington-Keokuk (IA)	A	A	A	U	A	A	–
66	East Central IL	A	A	A	U	A	A	–
67	Metropolitan Chicago (IN)	A	A	NAP	NAP	A	NAP	–
68	Metropolitan Dubuque (IA, WI)	A	A	A	U	A	A	–
69	Metropolitan Quad Cities (IA)	NAP	A	A	U	A	A	–
70	Metropolitan St. Louis (MO)	A	A	NAP	NAP	NAP	NAP	NAP
71	North Central IL	A	A	NAP	NAP	A	A	–
72	Paducah-Cairo (KY)	A	A	A	U	A	A	–
73	Rockford-Janesville-Beloit (WI)	A	A	A	U	A	A	–
74	Southeast IL	A	A	A	U	A	A	–
75	West Central IL	A	A	A	U	A	A	–
Iowa								
65	Burlington-Keokuk (IL)	A	A	A	–	A	A	–
68	Metropolitan Dubuque (IL,WI)	A	A	A	–	A	A	–
85	Metropolitan Omaha-Council Bluffs (NE)	A	A	A	–	A	A	NAP
69	Metropolitan Quad Cities (IL)	NAP	A	A	–	A	A	–
86	Metropolitan Sioux City (NE,SD)	A	A	A	–	A	A	–
87	Metropolitan Sioux Falls (SD)	A	A	A	–	A	A	–
88	Northeast IA	A	A	A	–	A	A	–

NA = Nonattainment (entire AQCR); A = Attainment; NAP = Nonattainment (portion of AQCR);
U = Unclassifiable; CBC = Can't Be Classified

TABLE B-1 (CON'T)

AIR QUALITY CONTROL REGION (AQCR)

AQCR NO.	AQCR DESIGNATION	POLLUTANTS						
		SO_2	NO_x	TSP	PM_{10}	CO	O_3	Pb
89	North Central IA	A	A	A	–	A	A	–
90	Northwest IA	A	A	A	–	A	A	–
91	Southeast IA	A	A	A	–	A	A	–
92	South Central IA	A	A	A	–	A	A	–
93	Southwest IA	A	A	A	–	A	A	–
Kansas								
94	Metropolitan Kansas City (MO)	A	A	A	–	A	A	–
95	Northeast KS	A	A	A	–	A	A	–
96	North Central KS	A	A	A	–	A	A	–
97	Northwest KS	A	A	A	–	A	A	–
98	Southeast KS	A	A	A	–	A	A	–
99	South Central KS	A	A	A	–	A	A	–
100	Southwest KS	A	A	A	–	A	A	–
Louisiana								
19	Monroe-El Dorado (AR)	A	A	A	–	A	A	–
22	Shreveport, Texarkana, Tyler (AR,OK,TX)	A	A	A	–	A	A	–
106	Southern Louisiana-Southeast Texas	A	A	A	–	A	NAP	–
Michigan								
122	Central MI	A	A	NAP	CBC	A	NAP	–
123	Metropolitan Detroit-Port Huron	A	A	NAP	NAP	NAP	A	–
124	Metropolitan Toledo (OH)	A	A	NAP	CBC	A	A	–
82	South Bend, Elkhart, Benton Harbor (IN)	A	A	A	CBC	A	NAP	–
125	South Central MI	A	A	NAP	CBC	A	NAP	–
126	Upper MI	A	A	NAP	CBC	A	A	–
Minnesota								
127	Central MN	A	A	A	A	NAP	A	–
128	Southeast MN-LaCrosse (WI)	NAP	A	NAP	A	A	A	–
129	Duluth-Superior (WI)	A	A	NAP	A	A	A	–
130	Metropolitan Fargo-Moorhead (ND)	A	A	A	A	A	A	–
131	Minneapolis-St. Paul	NAP	A	NAP	NAP	NAP	A	A
132	Northwest MN	A	A	A	A	A	A	–
133	Southwest MN	A	A	A	A	A	A	–
Missouri								

NA = Nonattainment (entire AQCR); A = Attainment; NAP = Nonattainment (portion of AQCR):
U = Unclassifiable; CBC = Can't Be Classified

TABLE B-1 (CON'T)

AIR QUALITY CONTROL REGION (AQCR)

AQCR NO.	AQCR DESIGNATION	POLLUTANTS						
		SO_2	NO_x	TSP	PM_{10}	CO	O_3	Pb
94	Metropolitan Kansas City (KS)	A	A	A	–	A	A	–
70	Metropolitan St. Louis (IL)	A	A	NAP	NAP	NAP	NAP	NAP
137	Northern MO	A	A	A	–	A	A	–
138	Southeast MO	A	A	NAP	–	A	A	NAP
139	Southwest MO	A	A	A	–	A	A	–
Montana								
140	Billings	NAP	A	NAP	U	NAP	A	–
141	Great Falls	A	A	NAP	U	NAP	A	–
142	Helena	NAP	A	NAP	NAP	A	A	NAP
143	Miles City	A	A	NAP	NAP	A	A	–
144	Missoula	A	A	NAP	NAP	NAP	A	–
Nebraska								
145	Lincoln-Beatrice-Fairbury	A	A	A	–	A	A	–
85	Metropolitan Omaha-Council Bluffs (IA)	A	A	A	–	A	A	NAP
86	Metropolitan Sioux City (IA,SD)	A	A	A	–	A	A	–
146	Nebraska	A	A	A	–	A	A	–
Nevada								
147	Nevada	NAP	–	NAP	–	A	A	–
148	Northwest NV	A	–	NAP	NAP	NAP	NAP	–
500	Las Vegas	A	–	NAP	NAP	NAP	A	–
New Mexico								
152	Albuquerque-Mid Rio Grande	A	A	NAP	U	NAP	A	–
12	AZ-NM Southern Border	NAP	A	A	U	A	A	–
153	El Paso-Las Cruces-Alamogordo (TX)	A	A	A	NAP	NAP	NAP	–
14	Four Corners (CO,UT)	A	A	A	NAP	A	A	–
154	Northeastern Plains	A	A	A	U	A	A	
155	Pecos-Permian Basin	A	A	A	U	A	A	–
156	Southwestern Mountains-Augustine Plains	A	A	A	U	A	A	–
157	Upper Rio Grande Valley	A	A	A	U	A	A	–
Oklahoma								
184	Central OK	A	A	A	–	A	A	–
17	Metropolitan Fort Smith (AR)	A	A	A	–	A	A	–
185	North Central OK	A	A	A	–	A	A	–

NA = Nonattainment (entire AQCR); A = Attainment; NAP = Nonattainment (portion of AQCR);
U = Unclassifiable; CBC = Can't Be Classified

TABLE B-1 (CON'T)

AIR QUALITY CONTROL REGION (AQCR)

AQCR NO.	AQCR DESIGNATION	POLLUTANTS						
		SO_2	NO_x	TSP	PM_{10}	CO	O_3	Pb
186	Northeastern OK	A	A	A	–	A	A	–
187	Northwestern OK	A	A	A	–	A	A	–
22	Shreveport, Texrkana, Tyler (LA,AR,TX)	A	A	A	–	A	A	–
188	Southeastern OK	A	A	A	–	A	A	–
189	Southwestern OK	A	A	A	–	A	A	–
Oregon								
190	Central OR	A	A	A	NAP	NAP	A	–
191	Eastern OR	A	A	A	NAP	A	A	–
192	Northwest OR	A	A	A	U	A	A	–
193	Portland (WA)	A	A	NAP	NAP	NAP	NAP	–
194	Southwest OR	A	A	NAP	NAP	NAP	A	–
South Dakota								
205	Black Hills-Rapid City	A	A	NAP	–	A	A	–
86	Metropolitan Sioux City (IA,NE)	A	A	A	–	A	A	–
87	Metropolitan Sioux Falls (IA)	A	A	A	–	A	A	–
206	South Dakota	A	A	A	–	A	A	–
Texas								
210	Abilene-Wichita Falls	A	A	A	CBC	A	A	–
211	Amarillo-Lubbock	A	A	A	CBC	A	A	–
212	Austin-Waco	A	A	A	CBC	A	A	–
213	Brownsville-Loredo	A	A	A	CBC	A	A	–
214	Corpus Cristi-Victoria	A	A	A	CBC	A	A	–
153	El Paso-Las Cruces-Almagordo (NM)	A	A	A	NAP	NAP	NAP	–
215	Metropolitan Dallas-Ft Worth	A	A	A	CBC	A	NAP	NAP
216	Metropolitan Houston-Galveston	A	A	A	CBC	A	NAP	–
217	Metropolitan San Antonio	A	A	A	CBC	A	A	–
218	Midland-Odessa-San Angelo	A	A	A	CBC	A	A	–
22	Shreveport, Texarkana, Tyler (LA,OK,AR)	A	A	A	CBC	A	A	–
106	Southern Louisiana-Southeast TX (LA)	A	A	A	CBC	A	NAP	–
Utah								
14	Four Corners (CO,NM)	A	A	A	NAP	A	A	–
219	Utah	A	A	A	–	A	A	–
220	Wasatch Front	NAP	A	NAP	NAP	NAP	NAP	–

NA = Nonattainment (entire AQCR): A = Attainment; NAP = Nonattainment (portion of AQCR):
U = Unclassifiable; CBC = Can't Be Classified

TABLE B-1 (CON'T)

AIR QUALITY CONTROL REGION (AQCR)

AQCR NO.	AQCR DESIGNATION	POLLUTANTS						
		SO_2	NO_x	TSP	PM_{10}	CO	O_3	Pb
Washington								
62	Eastern WA-Northern ID	A	A	NAP	NAP	NAP	A	–
227	Northern WA	A	A	A	CBC	A	A	–
228	Olympia-Northwest WA	A	A	A	NAP	A	A	–
193	Portland (OR)	A	A	NAP	CBC	NAP	NAP	–
229	Puget Sound	A	A	NAP	NAP	NAP	NAP	–
230	South Central WA	A	A	A	NAP	NAP	A	–
Wisconsin								
129	Duluth-Superior (MN)	A	A	NAP	A	A	A	–
237	Lake Michigan	A	A	NAP	–	A	NAP	–
68	Metropolitan Dubuque (IL,IA)	A	A	A	–	A	A	–
238	North Central WI	NAP	A	NAP	–	A	A	–
73	Rockford-Janesville-Beloit (IL)	A	A	A	–	A	A	–
239	Southeastern WI	A	A	NAP	–	A	NAP	–
128	Southeast MN-La Crosse (MN)	NAP	A	NAP	A	A	A	–
240	Southern WI	A	A	NAP	–	A	A	–
Wyoming								
241	Casper	A	A	A	–	A	A	–
242	Metropolitan Cheyenne	A	A	A	–	A	A	–
243	Wyoming	A	A	NAP	NAP	A	A	–

NA = Nonattainment (entire AQCR); A = Attainment; NAP = Nonattainment (portion of AQCR);
U = Unclassifiable; CBC = Can't Be Classified

SECTION C

NOISE METHODOLOGY AND CALCULATIONS

NOISE METHODOLOGY AND CALCULATIONS

IMPACT THRESHOLDS

Noise impacts can occur at any location where consolidated operations will result in either a significant increase in the rail activities or new noise producing activities. The ICC regulations [Ref. 1] require an assessment of noise increases at all locations where the consolidated activities will exceed the air quality thresholds given in Table N-1.

Table N-1. Noise Impact Assessment Thresholds

Any segment of rail line	Rail traffic increase of 100% as measured by gross tons annually or an increase of at least 8 trains/day
Yard areas	100% increase in any activity (measured by carload activity)
Truck traffic	Increase greater than 10% of Average Annual Daily Traffic or 50 trucks per day on any affected road segment

The ICC regulations specify two thresholds of noise levels for locations where noise assessments are required:

1. An increase in community noise exposure as measured by the Day-Night Equivalent Sound Level (abbreviated L_{dn}) of 3 dBA or more.
2. L_{dn} of 65 dBA or greater.

The noise increase is to be quantified for all sensitive receptors (schools, libraries, hospitals, residences, retirement communities and nursing homes) that are in the project area where these thresholds will be surpassed.

In general, an increase in L_{dn} of 3 dBA will result from a 100% increase in rail traffic, a substantial change in operating conditions, changed equipment, or a shift of daytime operations to the nighttime hours. Nighttime noise often dominates L_{dn} because of a weighting factor added to nighttime noise to reflect most people being more sensitive to nighttime noise. In calculating L_{dn}, the nighttime adjustment makes one event, such as a

freight train passby, occurring between 10 p.m. to 7 a.m. equivalent to ten of the same events during the daytime hours.

Assuming a typical separation distance of 150 feet from the rail line to residences, an L_{dn} level of 65 dBA from rail operations will usually require six or more trains per day. Near a grade crossing where the train whistles are sounded at full volume, six trains per day can cause L_{dn} to exceed 65 dBA at distances greater than 500 feet from the tracks.

The overall goal of the noise study is to identify noise sensitive land uses where the change in operations could result in noise exposure increases that meet or exceed the ICC thresholds. This assessment provides an estimate of the number of noise-sensitive receptors where there will be a significant increase in noise exposure and the ICC thresholds will be exceeded. The noise impact assessment study is based on baseline and proposed activity level data provided by UP/SP using noise models previously developed by Harris Miller Miller & Hanson Inc. (HMMH) and available in the literature. Noise measurements have been performed in limited locations to supplement available data on noise from various sources related to railroad operations.

This study represents a noise impact "screening" in that potential for impact has been evaluated using the information available at the time of the study. Because noise from railroad operations tends to cause localized impacts, a detailed assessment of noise impacts requires careful consideration of factors such as the location of the noise sources relative to the receptors, the specific equipment that will be used, the number of daytime and nighttime operations, the operating modes of the equipment, and any acoustical shielding between the receptors and the noise sources.

Following is an outline of the approach that has been used for the assessment of potential noise impacts:

1. Review available information and identify potential noise impacts. This has included visits to some of the line segments and facilities where the largest changes in activities will occur, review of USGS maps and aerial photographs, and discussions with UP/SP personnel about operation of the facilities and their experience with community noise problems.
2. Estimate existing noise levels. In most cases the available data from previous HMMH rail projects and published literature have been used to characterize existing community noise near railroad facilities.
3. Develop noise models. Models for estimating noise have been defined for all of the potentially significant noise sources. This includes: freight and passenger train operations on line sections of track; audible warning signals at grade crossings; squeal noise from humping operations in switching yards; locomotive movements in rail yards; idling locomotives and refrigerator cars on stationary trains; and cranes lifting equipment on or off of freight cars. The models are based on available data from previous HMMH projects and the literature.
4. Project existing and future noise exposure. Information on the locations of noise sources, distances and propagation paths to sensitive receptors, and existing and future operation plans have been used to estimate noise exposure in terms of the Day-Night Equivalent Level (abbreviated L_{dn} or DNL). Noise impact has been determined using the ICC criteria. Either noise contours have been drawn on USGS maps or clusters of residences or other sensitive receptors have been grouped together for a single noise projection instead of doing noise projections for each sensitive receptor. The final result of this analysis are estimates of the total number of sensitive

receptors where the proposed consolidation of UP and SP operations would be likely to increase noise exposure such that there would be impact according to the ICC criteria.

TYPES OF NOISE IMPACT

Rail Line Segments

The ICC Regulations specify that where an acoustical assessment is required, the analysis should determine for noise sensitive receptors whether the proposed action would result in a 3 dBA increase in noise exposure, as expressed by L_{dn}, or would result in L_{dn} exceeding 65 dBA. There are some track segments where the ICC threshold for a noise study is exceeded, but the total change in noise exposure would be insignificant. The approach taken was to only look at areas where the projected increase in train volume would be expected to cause: (1) more than a marginal change in noise exposure, and (2) a significant increase in the number of noise sensitive receptors within the L_{dn} 65 contour. For this study, any increase in L_{dn} less than 2 dBA was considered insignificant. A 2 decibel threshold was selected because:

1. Near railroad facilities, a plus or minus 2 decibel variation in L_{dn} is common because of the normal variation in factors such as: operating condition, operating procedures, weather, time of day, and equipment maintenance.
2. In most cases, a 2 decibel increase in noise exposure would cause only a small change (approximately 10%) in the number of residences within the L_{dn} 65 contour. This is because noise impacts from train operations tend to be localized to the residences closest to the tracks. The acoustical shielding provided by the first row or two of residences is usually sufficient to keep noise exposure below L_{dn} 65 at residences that are farther away.

3. The threshold of 2 decibels was considered appropriate since it only applies to neighborhoods where L_{dn} would be 65 dBA or higher. L_{dn} 65 represents a relatively noisy residential area.

Following is a summary of the procedures that have been used to estimate the number of noise sensitive land uses within the existing and future L_{dn} 65 dBA contours:

1. Site investigations were performed to identify sensitive land uses and observe the railroad operating procedures.
2. The distances to L_{dn} 65 dBA were calculated based on projected train operations for both line sections and grade crossing zones.
3. The distances were used to develop contours which were drawn on to USGS topographical maps.
4. The numbers of sensitive receptors within the 65 dBA contours were estimated. Adjustments were made to account for the effects of acoustic shielding by intervening buildings. The adjustments were based on the approach often used for highway noise projections [Ref. 5].

Rail Yards and Intermodal Facilities

Rail yards and intermodal facilities have a number of different sources of noise, including: locomotives moving rail cars, retarders, cranes or fork lifts used to load and unload flat cars, and trucks entering and exiting the facilities. As an initial approximation, the change in noise exposure that would be caused by these activities can be estimated using the following relationship:

$$\text{Change in } L_{dn} = 10 \log(\text{future volume/existing volume})$$

Although the land use in the immediate vicinity of each facility and the proximity to noise sources need to be considered, this scaling gives an indication of which facilities have the

potential of causing noise impacts. For most facilities the projected increase in noise exposure is relatively modest, indicating that increased noise impact would not be likely except in localized areas.

The general approach that has been used to evaluate potential noise impacts for rail yards and intermodal facilities where the projected activities exceed the ICC thresholds is:

1. Determine whether the projected change in activity is likely to cause a 2 dBA or greater change in L_{dn}. If not, no additional noise study was performed.
2. Through review of maps and site visits, determine if there are any noise sensitive receptors in the vicinity of the installation. Many facilities are in industrial areas and have no noise sensitive land uses near by, which means that there will not be any noise impacts.
3. Estimate the existing and future L_{dn} levels for any noise sensitive land uses near the facility.
4. Estimate the number of sensitive receptors within the L_{dn} 65 dBA contour for existing and projected future volumes of activity or where L_{dn} will increase by at least 3 dBA. The counts were developed using USGS maps and information from site visits.

Abandonment Projects

In most cases, there will only be indirect negative noise impacts associated with the abandonment projects. Once a rail facility such as a line segment or yard is abandoned, any noise sensitive receptors living near the facility will experience a reduced level of noise exposure. Any negative noise impacts would be the result of moving the rail traffic or yard activities to another facility. These impacts are covered in the sections on operational and new construction impacts.

Construction Projects

Noise assessment from the planned construction projects has focused on the noise that would result from use of the facility once it is operational. Although most construction projects have the potential of causing intrusive noise at nearby noise sensitive land uses, the noise impact is for a limited duration. Construction noise does not create any permanent noise impacts. Most of the construction projects expected to occur as a result of the UP/SP merger would consist of construction activities that last for, at most, one to two months at any one location with noise during that period similar to that caused during normal track maintenance procedures.

For all of the construction projects, noise producing activities will be limited to daytime hours unless there are circumstances that require nighttime construction. At any locations where construction would continue for an extended period of time and could affect noise sensitive land uses, appropriate efforts will be made to see that: construction activities will be in compliance with local noise ordinances; equipment used on projects is kept in good working condition with effective mufflers installed; vehicles and construction equipment is restricted to construction areas and haul routes; and contractors select construction processes and techniques that minimize noise levels.

Common Point Connections

Most common point connections will involve construction or upgrading of connections between UP/SP mainline tracks. Specific noise projections have only been developed for connections that would be in relatively close proximity to residential or other noise sensitive land uses. In many cases the connections would be in isolated areas, rail yard areas, or industrial areas where there is very little potential for noise impact.

Where noise impact is possible, the existing noise exposure has been projected based on the average existing rail traffic on the connecting mainlines. The projections of future noise exposure include the noise from trains on the mainlines and the trains expected to use the connecting track.

Corridor Upgrades

Most of the corridor upgrades consist of extensions to sidings, new sidings, or adding double tracking. Noise from double tracks will be evaluated as part of the rail corridor analysis if the projected increase in rail traffic exceeds one of the ICC thresholds. In most cases, new sidings and expansion of existing sidings will have no noise impacts since the only additional noise from these sidings would be caused by idling locomotives and refrigerator cars while the trains are sitting on the siding tracks. The stationary trains would only affect land uses in the immediate vicinity of the sidings. In most cases, the noise from through trains on the mainline would still dominate the overall noise exposure.

Potential for noise impact has been evaluated only for sidings with residential or other noise sensitive land uses located within 200 feet of the siding. This screening distance is based on a worst case of trains occupying a siding for 300 minutes per day with the locomotives in the same position for 150 minutes per day. For the sidings where noise impacts are possible, noise projections have been developed based on best estimates of the average number of minutes that trains would use the siding each day, and the typical number of locomotives.

Terminals, Intermodal Facilities and Auto Facilities

There are a number of terminals (rail yards), intermodal facilities, and auto facilities where there new construction is proposed to increase capacity. For the facilities where the construction would constitute a significant new noise source at sensitive receptors or

cause an increase in activity that exceeds one of the ICC thresholds, the facility has been evaluated as discussed previously in Rail Yards and Intermodal Facilities.

NOISE PROJECTION MODELS

This section describes the noise models used for this project. All of the models described in this section are common acoustic models defined in acoustics literature or have been used extensively on previous HMMH projects requiring analysis of freight train noise. Each model projects noise from a specific source, such as freight cars or a classification yard, based on a reference noise level derived from measurements, either measurements performed as part of this project, measurements performed as part of previous HMMH projects, or data available in the literature. Most of the available data on rail yards is from EPA sponsored studies that were performed 15 to 20 years ago. The loudest noise sources, such as squeal from hump yard retarders, have not substantially changed since these studies. Where equipment has changed, the change has generally been in the direction of lower noise emissions, which means that there could be cases where supplementing the available reference levels with newer data would reduce the projected noise exposure.

The noise models for through trains, grade crossings (including both train whistles and active warning devices at the grade crossing), idling trains, and rail yards are described below:

Through Trains

Noise from freight cars is caused by the steel wheels rolling on the steel rails. This is referred to as wheel/rail noise. The noise is dependent on train speed with noise level varying approximately as $30 \times log_{10}(\text{speed})$. The noise levels can increase by as much as

15 dBA when wheels or rail are in poor condition. One of the most common problems on wheels is the formation of flats caused by wheels sliding under hard braking.

The main components of locomotive noise are: the exhaust of the diesel engines, cooling fans, general engine noise, and the wheel/rail interaction. Noise associated with the engine exhaust and cooling fans usually dominates; this noise is dependent on the throttle setting (most locomotives have eight throttle settings) and not on locomotive speed.

Tests have shown locomotive noise to change by about 2 dBA for each one step change in throttle setting. This means that noise levels increase by about 16 dBA as the locomotive throttle is moved from notch one to notch eight. Since locomotive engineers constantly adjust throttle setting as necessary, at best rough estimates of throttle settings are all that is usually available for noise projections. Numerous field measurements of freight train operations indicate that assuming a base condition of throttle position six and adjusting noise levels when better information about typical throttle position is known results in reasonably accurate projections of locomotive noise.

Given the L_{max} of freight cars and a locomotive under a specific set of reference conditions, the noise models allow estimating L_{max}, SEL, L_{dn} and other noise metrics for varying distance from the track, train speeds, and schedules. The standard approach to projecting freight car noise is to model freight cars as moving, incoherent, dipole line sources [Ref. 2,3]. The basic equations are:

$$L_{max} = K_c + 10log[\alpha + 0.5*sin(2\alpha)] - 10log(y) - 10log(s/s_{ref}) - c_g - c_a - c_s \quad (1)$$

$$K_c = L_{max\text{-}ref} - 10log[\alpha_{ref} + 0.5*sin(2\alpha_{ref})] - 10log(y_{ref}) \quad (2)$$

$$SEL = L_{max} + 10log(len/v) - 10log[2\alpha + sin(2\alpha)] + 3.3 \quad (3)$$

For locomotives, which can be modeled as moving monopole point sources, the corresponding equations are as follows:

$$L_{max} = K_L + 10log(2\alpha) - 10log(y) + 10log(s/s_{ref}) - c_g - c_a - c_s \quad (4)$$

$$K_L = L_{max\text{-}ref} - 10log(2\alpha_{ref}/y_{ref}) \quad (5)$$

$$SEL = L_{max} + 10log(len/v) - 10log(2\alpha) + 3.3 \quad (6)$$

The parameters which apply to the equations above are:

y = observer perpendicular distance from track centerline, feet

y_{ref} = reference observer distance from track centerline, feet

len = train length, feet

len_{ref} = reference train length, feet

α = $\tan^{-1}(len/2/y)$

α_{ref} = $\tan^{-1}(len_{ref}/2/y_{ref})$

s = train speed, feet/second

s_{ref} = reference train speed, feet/second

v = train speed, mph

L_{max} = maximum sound level during train passby, dBA

$L_{max\text{-}ref}$ = maximum sound level during train passby with reference conditions, dBA

c_g = excess ground attenuation, dBA

c_a = excess air absorption, dBA

c_s = excess shielding attenuation, dBA

The "standard train" for the consolidation analysis is 3-1/2 locomotives and 5000 feet of rail cars. Figure N-1 shows the L_{dn} levels as a function of distance from the near track for different number of trains per day at a train speed of 50 mph. For this calculation, it is assumed that trains are equally likely to occur any hour of the day, which means that on average 9 out of 24 trains will pass during the nighttime hours. This is critical since, in the calculation of L_{dn}, one nighttime train is equivalent to ten daytime trains. Assuming that there would be no trains in the nighttime hours reduces the projected L_{dn} levels by over 6 decibels. Another important factor in Figure N-1 is that no excess attenuation from acoustic shielding is included. At distances beyond 100 feet or so, there are often

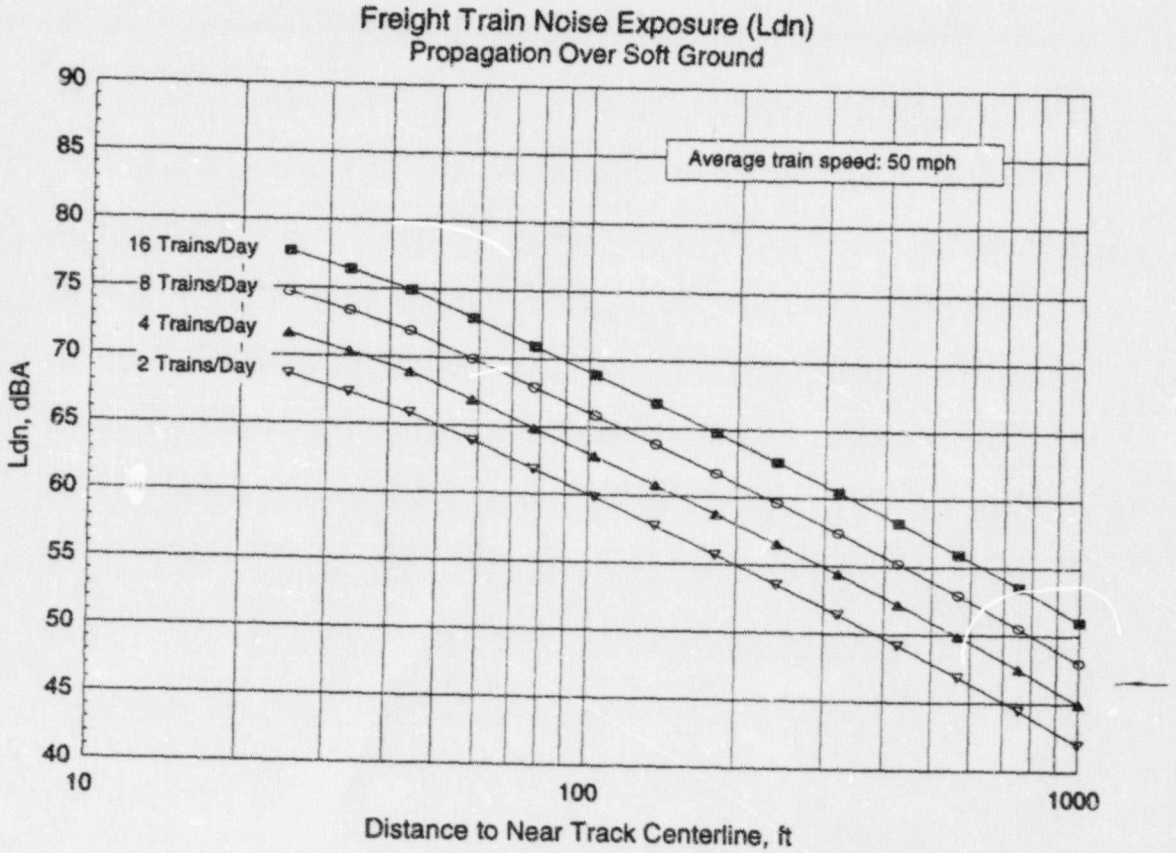
obstructions such as buildings or the terrain that act as a partial acoustic shield causing attenuation of 5 to 10 decibels.

Referring to Figure N-1, for a train speed of 50 mph, the distances to L_{dn} of 65 dBA as a function of the number of trains per day are:

Average Number of trains per day	Distance to L_{dn} = 65 dBA
2	50 ft
4	77 ft
8	116 ft
16	175 ft

Since the reference quantities used are based on numerous measurements of train noise, the curves in Figure N-1 and the distances given above are good representations of real field conditions. However, there are a number of factors that can affect levels of L_{dn}. These include: a concentration of trains during the nighttime hours, locomotives operating at throttle settings higher than six, wheel or rail condition being worse than normal, or train whistles being sounded on a regular basis. Projecting noise exposure at grade crossings is discussed in the next section.

Figure N-1. Noise Exposure vs. Distance from Tracks



Grade Crossings

Freight trains are required to sound their whistles before most at-grade rail-street crossings. The minimum sound level of the whistles at a distance of 100 feet in front of the locomotives is specified as 96 dBA by the FRA. In practice, the whistles on most freight and Amtrak trains generate maximum levels of 105 to 110 dBA 100 feet in front of the trains. The exact manner in which the whistles are sounded varies depending on local and state ordinances. Because of the high noise levels created by train whistles, noise exposure will be dominated by whistle noise near any grade crossing where sounding the whistles is required. Additional noise sources associated with grade crossings are the grade crossing bells that start sounding just before the gates are lowered and idling traffic that must wait at the crossing. This noise is usually insignificant in comparison to the whistle noise.

The key components in projecting noise exposure from whistle noise are the whistle sound level, the duration of the whistle noise, the distance of the receiver from the tracks, and the number of trains during the daytime and nighttime hours. FRA Regulation 229.129, "Audible warning device," requires all lead locomotives to have an audible warning device that produces a minimum sound level of 96 dBA at a distance 100 feet in front of the locomotive. Most freight train audible warning devices are air whistles or horns. The maximum sound level of the air whistles usually can be adjusted to some degree by adjusting the air pressure. Our experience is that maximum sound levels are 105 to 110 dBA at 100 feet in front of the trains, well above the 96 dBA required by the regulations.

To develop a realistic model of noise exposure from train whistles near grade crossings, we have used data collected as part of a previous HMMH project in Carrollton, TX near a Burlington Northern (BN) grade crossing. Two 24-hour measurement sites were approximately 200 to 300 feet from the grade crossing. All of the BN trains sounded their whistle as they approached the grade crossing. Since half of the trains passing the measurement site had already been through the grade crossing, only half of the trains were sounding the whistles as they passed the measurement sites. The maximum sound levels from the whistles averaged about 100 dBA at the measurement distances of just over 200 feet from the tracks. Normalized to a distance of 100 feet, the maximum sound level ranged from 105 to 110 dBA. The train whistles were the loudest noise in this area by a wide margin.

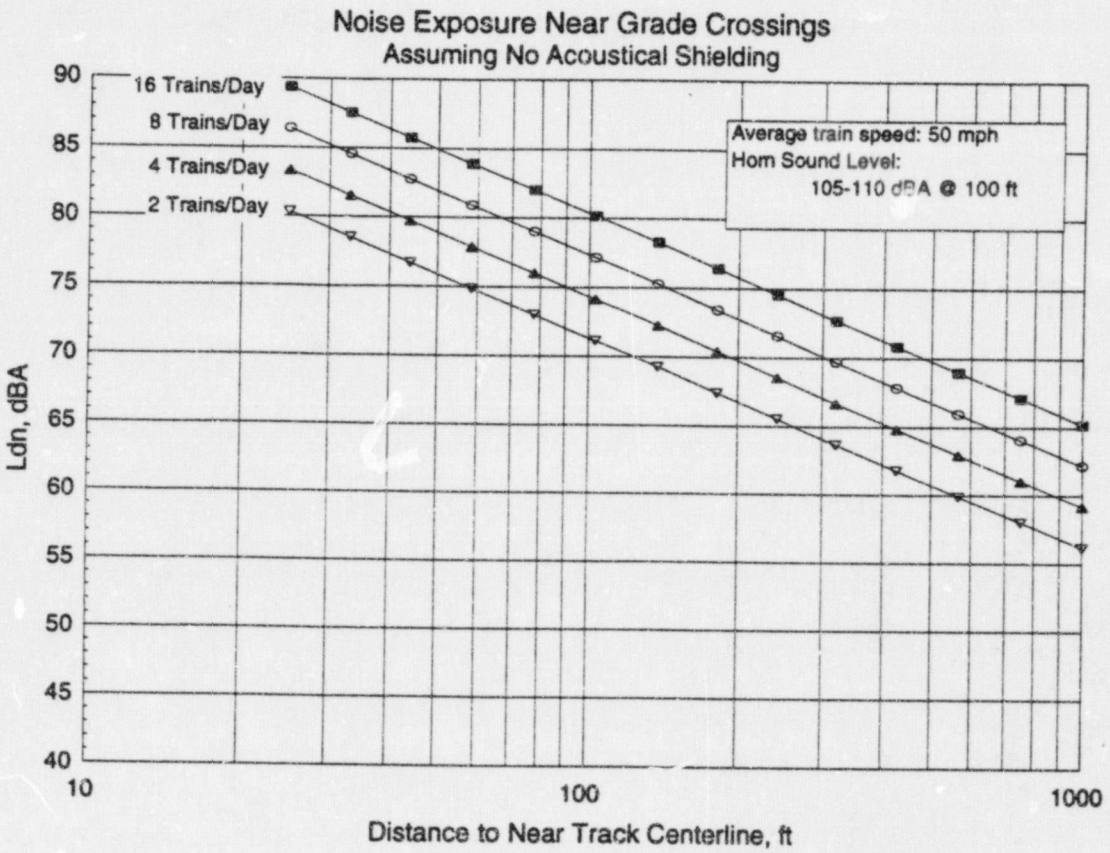
The average train SEL's were used to develop the noise projection model. The average SEL (energy averaged) was 111 dBA normalized to a distance of 100 feet from the track centerline. Figure N-2 shows the projected noise exposure near grade crossings in terms of L_{dn}. The assumptions include: the whistles are sounded by all the trains in one direction, train speed is approximately 50 mph, the maximum whistle sound level is 105 to 110 dBA at 100 feet in front of the train, and the whistle noise attenuates at a rate of 4.5 decibels for each doubling of distance. A more detailed model of whistle noise would require detailed information about the geometry and operating conditions at each grade crossing, which was not possible for this project.

Figure N-2 shows the noise exposure near grade crossings as a function of distance from the tracks for different numbers of trains per day. Train passbys are assumed to be equally likely during the daytime and nighttime hours, which means that, on average, 9 out of 24 trains pass in the nighttime hours. Following is a comparison of the distances to the L_{dn} 65 dBA contour with and without whistles:

Average Number of trains per day	Distance to L_{dn} = 65 dBA	
	Without whistles	With whistles
2	50 ft	260 ft
4	77 ft	410 ft
8	116 ft	650 ft
16	175 ft	1000 ft

These numbers show how important audible warnings at grade crossings can be in evaluating potential noise impacts from line-haul freight trains. Since the most common requirement is that train whistles be sounded starting 1/4 mile from a grade crossing, approximately 1/2 mile of track is affected at every grade crossing. Because the distance to impact increases by a factor of four to five times over that without grade crossings, the total area exposed to noise exceeding impact thresholds is much greater near grade crossings where whistles are sounded.

Figure N-2. Noise Exposure vs. Distance Near Grade Crossings



Railroad Yards

Noise from railroad yards was studied extensively in the 1970's by the EPA as part of their efforts to develop noise emission regulations for interstate rail carriers. The results and models developed in these studies were published in a background document in 1979 [Ref. 4]. Projections of rail yard noise for the UP/SP consolidation have been based on these models. The models allow calculating L_{dn} for a variety of sources based on empirically-derived source noise levels, yard activity levels and distance. Models have been developed for the following yard noise sources:

- Inbound/Outbound Road-Haul and Local Train Operations
- Switch Engine Operations
- Retarders
- Car Impacts
- Idling Locomotives and Refrigeration Cars
- Locomotive Engine Load Tests
- Intermodal Yard Equipment

The three general equations used to calculate L_{dn} at a given location are as follows:

$$L_{dn} = SEL + 10 \log_{10}(N_d + 10N_n) - 49.4 - 10 \log_{10}(D/100)^n - k(D-100) \quad (7)$$

$$L_{dn} = L_{max} + 10 \log_{10}(NH_d+10NH_n) - 13.8 - 20 \log_{10}(D/100) - k(D-100) \quad (8)$$

$$L_{dn} = L_{max} + 10 \log_{10}(NH_d+10NH_n) - 13.8 - 20 \log_{10}(D/100) - k(D-100) + 8 \log_{10}(1.33N_1) + 10 \log_{10}(NR) \quad (9)$$

Where:

SEL = Source Sound Exposure Level at 100 feet, dBA

N_d = Number of daytime noise events (7 a.m. to 10 p.m.)

N_n = Number of nighttime noise events (10 p.m. to 7 a.m.)

n = 1 for moving sources

= 2 for stationary sources

D = Distance from noise source, feet

k = Combined air/ground sound absorption coefficient, dBA/ft

L_{max} = Average maximum source noise level, dBA

NH_d = Number of hours of source operation during the daytime (7 a.m. to 10 p.m.)

NH_n = Number of hours of source operation during the nighttime (10 p.m. to 7 a.m.)

N_1 = Number of noise sources per row

NR = Number of rows of noise sources

Equation 7 models moving or stationary transient point sources, Equation 8 is for stationary steady-state point sources, while Equation 9 is a truncated line source model applicable for groups of stationary point sources. A listing of the appropriate equations and input parameters for each of the rail yard noise sources is given in Table N-2, and more detailed modeling assumptions for each of these sources are described below.

Table N-2. Modeling Parameters for Rail Yard Noise Projections

Noise Source		Eqn. No.	Noise Level (dBA)		Basic Activity Level Parameters	n	k (dBA/ft)	Source Grouping	
			SEL	L_{max}				N_1	NR
Train Operations		7	95	78	# Trains/Day	1	0.0020	--	--
Hump Switch Engines		7	95	78	# of Cars Classified/Day	1	0.0010	--	--
Other Switch Engines	Hump Yard								
	Flat Yard		98	83					
Retarders		7	108	111	# of Cars Classified/Day	2	0.0100	--	--
Car Impacts		7	94	99	# of Cars Classified/Day	2	0.0050	--	--
Idling Equipment	Locomotives	9	--	67	# of Hours of Operation/Day	--	0.0025	2	3
	Refrigerator cars						0.0035	5	4
Locomotive Load Tests		8	--	78	# of Hours of Operation/Day	--	0.0020	--	--
Intermodal Yard Equipment	Cranes	8	--	81	# of Hours of Operation/Day	--	0.0025	--	--
	Trailer-mounted refrigerator units		--	67			0.0035		

Inbound/Outbound Road-Haul and Local Train Operations

These train operations are modeled as moving point sources at a speed of about 5 mph, dominated by locomotive engine noise. It is assumed that local and road haul trains are powered by one and three engines, respectively, and that the train arrivals and departures are uniformly distributed over the daytime and nighttime periods. Thus:

$N_d = (15/24)[(3)(\#\text{ Road-Haul Trains/Day}) + \#\text{ Local Trains/Day}]$ and

$N_n = (9/24)[(3)(\#\text{ Road-Haul Trains/Day}) + \#\text{ Local Trains/Day}]$

For modeling purposes, train operations are taken to be split between two locations, with inbound road-haul trains located in the receiving area of the yard and with outbound road-haul trains and local trains located in the departure area.

Switch Engine Operations

Switch engine operations are modeled as moving point sources which operate in the receiving and departure yards at a speed of about 4 mph, with operations uniformly distributed over the daytime and nighttime periods. For hump switch engine operations, located in the receiving yard, it is assumed that the average cut of cars to be humped contains 50 cars and that there are two engine passbys per hump operation. For other switch engine operations in hump yards, assumed to be located in the departure area, it is assumed that 10 cars are handled per switch engine and that there are two engine passbys per operation. For switch engine operations in flat yards, it is assumed that operations are split between two locations, one in the receiving yard and one in the departure yard, that 5 cars are handled per switch engine and that there are two passbys per operation. Thus:

$N_d = (15/24)(2/C)(\#\text{ of Cars Classified/Day})$ and

$N_n = (9/24)(2/C)(\#\text{ of Cars Classified/Day})$

where: C = cars per switch operation

= 50 for Hump Switch Engine Operations

= 10 for Other Switch Operations in Hump Yards

= 5 for Switch Engine Operations in Flat Yards

Retarders

Retarders are modeled as grouped point sources located in the classification area of the yard, and it is assumed that retarder noise is uniformly distributed over the daytime and nighttime periods. Operable retarders, including master, group, intermediate and track retarders, are grouped at a single location at the geometric center of the retarders. For these, it is assumed that each car classified passes two retarders, on average, and that retarder squeal occurs about 50 percent of the time. For inert retarders, grouped at a

single point at the opposite end of the classification area, it is assumed that each car classified passes through one retarder, and that retarder squeal occurs about 85 percent of the time. Thus:

$N_d = (15/24)(F)(\#\text{ of Cars Classified/Day})$ and

$N_n = (9/24)(F)(\#\text{ of Cars Classified/Day})$

where: F = 1.0 for Master, Group, Intermediate and Track Retarders

= 0.85 for Inert Retarders

Car Impacts

Car impacts are modeled as stationary point sources, grouped at two locations in the classification area of the yard. It is assumed that the total number of car impacts is equal to about half of the number of cars classified per day, and that the impacts are distributed uniformly over the daytime and nighttime periods. Thus:

$N_d = (15/24)(0.5)(\#\text{ of Cars Classified/Day})$

$N_n = (9/24)(0.5)(\#\text{ of Cars Classified/Day})$

Idling Locomotives and Refrigeration Cars

Idling locomotives and refrigeration cars are modeled as grouped point sources located in the classification area of the yard, using a truncated line source model. L_{dn} is calculated using Equation 9 based on the hours of daytime (NH_d) and nighttime (NH_n) idling operation, assuming a prototypical arrangement of noise sources.

Locomotive Engine Load Tests

Load test cells are modeled as stationary point sources located in the classification area of the yard. Although 1979 EPA data suggest a noise source level (L_{max}) of 90 dBA at 100 feet, the present model assumes compliance with subsequent EPA Railroad Noise Emission Standards (40 CFR Part 201) which specify a maximum level of 78 dBA at 100

feet. Where specific information is unavailable, EPA suggests an assumption of 6 hours of testing per day, with NH_d = 4 hours and NH_n = 2 hours.

Intermodal Yard Equipment

The dominant noise sources at an intermodal facility include TOFC/COFC cranes and trailer-mounted refrigeration units, which are modeled as stationary point sources located in the intermodal yard area. The source noise levels given in Table N-2 are based on HMMH file data. L_{dn} is calculated using Equation 2, based on the number of units and the number of hours of daytime and nighttime operation. Thus:

Nh_d = (# of units)(# of hours of operation during the day)

NH_n = (# of units)(# of hours of operation at night)

Off-site truck traffic noise is projected based on the FHWA Highway Traffic Noise Prediction Model [Ref. 5]. This model also includes shielding estimates that can be applied to all of the above rail yard noise sources.

REFERENCES

49 CFR 1105.7(e)

Rathe, E.J., "Railway Noise Propagation," *Journal of Sound and Vibration*, vol. 51, no. 3, pp. 371-388 (1977).

Saurenman, H.J., Nelson, J.T. and Wilson, G.P., "Handbook of Urban Rail Noise and Vibration Control," UMTA-MA-06-0099-82-1 (February 1982).

United States Environmental Protection Agency, Office of Noise Abatement Control, "Background Document for Final Interstate Rail Carrier Noise Emission Regulation: Source Standards," EPA 550/9-79-21 (December 1979).

Barry, T.M. and Reagan, J.A., "FHWA Highway Traffic Noise Prediction Model," FHWA-RD-77-108 (December 1978).

SECTION D

TRANSPORTATION METHODOLOGY

TRANSPORTATION METHODOLOGY

GENERAL OVERVIEW

The ICC regulations require a description of the effects of the proposed consolidation on regional or local transportation systems and patterns and an estimate of the amount of passenger or freight traffic which might be diverted to other transportation systems or modes. The primary transportation-related issues associated with the proposed consolidation of UP and SP systems will be the abandonment of 17 rail lines, the change in operations of intermodal and automotive facilities and the truck-to-rail diversions expected as a result of the merger.

Rail line abandonments generally result in rail-to-truck or rail-to-rail diversions of commodities. For this evaluation, rail-to-rail diversions (if any) are treated as no change in transportation impacts. Rail-to-truck diversions are described individually for each abandonment.

Increased or decreased truck traffic are the major impacts associated with operation of intermodal and automotive facilities 1) in the vicinity of the facility, and 2) on the regional highway network.

The impacts of truck-to-rail diversions are viewed on a systemwide basis, as representing a shift in long-distance hauls from truck to rail with the associated benefits to the interstate highway system, energy consumption, and air emissions.

Therefore, transportation analyses were conducted for the following components of the UP/SP merger:

- Rail-line abandonments (see Part 4);
- Changes in operation of intermodal and automotive facilities (see Part 3); and,

- Truck-to-rail diversions (see Part 1).

RAIL LINE ABANDONMENTS

Based on 1994 carload shipment data provided by UP and SP, rail-to-truck diversions from rail line abandonments will not meet ICC thresholds triggering a calculation of energy consumption changes. These ICC thresholds are as follows: if the proposed action will cause diversions from rail to motor carriage of more than: 1) 1,000 rail carloads a year, or 2) an average of 50 rail carloads per mile per year for any part of the affected line, then an analysis would need to be completed. Therefore, truck traffic increases were not quantified. Impacts to regional transportation networks are anticipated to be insignificant according to data on annual carloads and the locations of shippers along the 17 abandoned lines.

INTERMODAL AND AUTOMOTIVE FACILITIES

The analysis of potential changes to intermodal and automotive facility operations were based on truck-to-rail diversion studies conducted by Reebie and Associates (1995) and Transmode (1995), intermodal to intermodal diversions, expected facility consolidation impacts and the effects of the BN/Santa Fe merger. These merger-related conditions formed the basis of an analysis of potential changes to local and regional truck traffic volumes in the vicinity of intermodal and automotive facilities.

For intermodal facilities, truck traffic volume changes were assumed to be directly correlated to the change in the number of "lifts" predicted to occur at each intermodal facility, each lift representing one intermodal container lifted onto or off of a rail car. The analysis assumed that each increase or decrease of 1.25 lifts represents a corresponding increase or decrease of 1 truck. The ratio of 1.25 lifts to 1 truck means that approximately 20 percent of trucks enter and leave an intermodal facility fully loaded, while approximately

80 percent of trucks enter the facility loaded and leave empty or enter the facility empty and leave loaded. Each additional truck corresponds to two truck trips that would be added to the Average Daily Traffic (ADT) volume of the local roadway network.

For locations in which the existing UP and SP intermodal hubs are to be consolidated at one facility, the activity at the facility to be closed was added to that of the consolidation hub. Yearly estimates of total intermodal units, provided by UP and SP, were divided by 365 to obtain an average daily estimate, since intermodal facilities generally operate 7 days per week, 24 hours per day. Trucks may (and do) enter facilities at any time, independent of train schedules, to drop off or pick up containers from parking lot areas.

The analysis of potential merger-related changes at automotive facilities utilized a methodology similar to that used for the intermodal facilities, except that the automotive facility analysis was based on predicted changes in rail car activity at the automotive facility. Post-merger estimates of automotive railcar activity were provided by UP and SP. Railcar activity at hubs expected to close as a result of the merger was added to the activity estimates at the consolidation sites.

An assumption of 10 vehicles per railcar and 8.4 vehicles per truck were applied to the railcar estimates to obtain yearly estimates of truck increases or decreases at each automotive facility. Daily estimates of truck traffic increases or decreases were obtained by dividing the yearly estimate by 312, since the automotive facilities typically operate 6 days per week, 24 hours per day. As with the intermodal facilities, trucks may enter the automotive facility at any time, independent of train schedules, to drop off or pick up automobiles from parking lot areas.

For all intermodal and automotive facilities, UP and SP personnel developed predicted increases or decreases in activity.

LOCAL TRANSPORTATION IMPACTS

Impacts on ADT volumes were calculated (where ADT data were available) by adding the additional truck-trips per day to the ADT on local access routes to intermodal and automotive facilities. Access routes were identified from published UP and SP sources, developed as directions to truck drivers.

REGIONAL TRANSPORTATION IMPACTS

Regional transportation effects were evaluated based on the opportunities to consolidate intermodal and automotive facilities within a geographic area. Where facilities will be combined, it was assumed that regional transportation impacts would remain the same, if not reduced to some extent (10 to 15 percent according to UP/SP personnel) by truck travel between the two facilities, known as "rubber tire" traffic.

If significant truck-to-rail diversions would occur at a given facility without offsetting decreases at another facility in the region, increased impacts were assumed.

TRUCK-TO-RAIL DIVERSIONS

System-wide impacts to the national transportation network were estimated based on the truck diversion study conducted by Reebie Associates and Transmode. This study evaluated the number of truck loads of traffic that will, as a result of the UP/SP merger, be diverted from long-distance truck haul to rail transport. Origin-destination data provided in this study were used to estimate truck miles saved as a result of diversions to intermodal and automotive transport.

REFERENCES

Reebie Associates and Transmode, Truck to Rail Diversion Study, 1995.

UP/SP Operating Plan, 1995.

Dames & Moore has received data from appropriate UP and SP officials which was used in the preparation of this report.

SECTION E

SAFETY METHODOLOGY AND CALCULATIONS

SAFETY

GENERAL

The Operating Plan indicates that rail connections will be constructed at strategic locations to improve operating efficiencies. These connections are listed in the descriptions of new construction in Part 5. The plans for these connections were reviewed to determine if the connections would require the construction of grade crossings. UP/SP state that none of the construction projects associated with the merger involve crossing a road for the first time. Therefore, it is anticipated that there would not be significant adverse affects on safety as a result of new grade crossings.

HAZARDOUS WASTE METHODOLOGY

Information from UP/SP was reviewed regarding known hazardous waste sites near the lines designated for abandonment. Information was reviewed from several federal and state environmental databases through VISTA Environmental Information Inc. (VISTA) to assess if activities on or adjacent to the rail segment (within 500 feet) would potentially threaten the environmental quality of the rail segments to be abandoned. The list of databases are described below. It should be noted that this information is reported as received from VISTA, which reports information as it is provided in various government databases. It is not possible for UP/SP to verify the accuracy or completeness of information contained in these databases. The use of and reliance on this information is a generally accepted practice in the conduct of environmental due diligence.

- Federal NPL List

The EPA's National Priorities List (NPL) of uncontrolled or abandoned hazardous waste sites was reviewed for sites within 500 feet of the rail segment. To appear on the NPL, sites must have met or surpassed a predetermined hazard ranking system score, been chosen as a state's top priority site, pose a significant health or environmental threat, or be a site where the EPA has determined that remedial action is more cost-effective than removal action.

- Federal CERCLIS List

The EPA's Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) listings were reviewed to determine if sites within 500 feet of the rail segment are listed for investigation. The CERCLIS database identifies hazardous waste sites that require investigation and possible remedial action to mitigate potential negative impacts on human health or the environment.

- Federal RCRA TSD List

The current RCRA Notifiers List was reviewed to assess if any RCRA treatment, storage, or disposal sites (TSDs) are within 500 feet of the rail segment.

- Federal ERNS List

The EPA's Emergency Response Notification System (ERNS) list, which contains reported spill records of oil and hazardous substances,was reviewed to identify ERNS sites within 500 feet of the rail segment.

- State Priority List (Hazardous Waste and Land-Based Disposal Sites)

The State Priority List (SPL) inventory, details sites included in the inventory of active and historical waste disposal sites, and sites scheduled for investigation or

remediation. The State inventory of solid waste facilities (SWLF) includes current and historical solid waste landfill sites and solid waste facilities which have permit applications on file. The SPL and or SWLF lists were reviewed to assess if SPL or SWLF sites are within 500 feet of the rail segment.

- State Leaking LUST Sites

The State inventory of leaking underground storage tanks (LUST) was reviewed to assess if there are LUST sites within 500 feet of the rail segment.

- Other Information (Unmappable Database Sites)

The Orphan or Unmappable Sites were reviewed, which are sites that have not been geocoded by VISTA based on lack of sufficient data regarding their exact location within the general area. Information regarding the unmappable sites was reviewed in an effort to identify locations where the unmappable sites may have impacted the rail segment.

SECTION F

ENERGY ANALYSIS

ENERGY ANALYSIS

The energy impact analysis focused on potential changes in fuel consumption from merger-related truck to rail diversions, using the following assumptions:

- Average number of intermodal containers per railcar = 1.8
- Average number of intermodal railcars per train = 50
- Average number of locomotives per train = 3.5
- Average weight of loaded intermodal railcar = 60 tons
- Average weight of locomotive = 200 tons
- Average truck weight = 40 tons
- For rail, a fuel efficiency of 628 gross ton-miles per gallon diesel fuel
- For trucks, a fuel efficiency of 140 gross ton-miles per gallon of diesel fuel

Truck to rail diversion information was obtained from studies conducted by Reebie Associates and Transmode. The assumptions for intermodal train configuration, average railcar weights, and rail fuel efficiencies were obtained from UP and SP. The 140 ton-mile per gallon truck fuel efficiency factor represents an average value for trucks involved in medium-distance and long-distance hauls of various commodities (Abacus Technology Corp., 1991), which are the types of truck hauls most likely to be diverted. The rail fuel efficiency factor was derived from 1994 UP and SP traffic and fuel consumption data.

Using the truck to rail diversion estimates and assumptions listed above, gross ton-mile estimates were calculated for both rail and truck, using the following formulas:

1. No. of railcars = $\frac{\text{Number of trucks diverted}}{\text{1.8 intermodal units/railcar}}$

2. Railcar gross ton miles = (No. of railcars) X (60 tons/railcar) X (train distance)

3. Number of Locomotives = $\frac{\text{(No. of railcars)}}{}$ X (3.5 locomotives/train)

(50 railcars/train)

4. Locomotive gross ton miles = (No. of locomotives) X (200 tons/locomotive) X (train distance)

5. Truck gross ton miles = (No. of trucks diverted) X (40 tons/truck) X (truck distance)

Following the calculation of estimated gross ton miles for rail and truck, the associated fuel efficiency factors were applied to obtain total rail and truck fuel consumption estimates and projected merger related changes as a result of the truck to rail diversions.

Based on 1994 carload shipment data provided by UP and SP, rail-to-truck diversions from rail line abandonments will not exceed ICC thresholds triggering a calculation of energy consumption changes. These ICC thresholds are as follows: if the proposed action will cause diversions from rail to motor carriage of more than: 1) 1,000 rail carloads a year, or 2) an average of 50 rail carloads per mile per year for any part of the affected line, than an analysis would need to be completed. These thresholds are in excess of the expected diversions; therefore, the effects of truck traffic increases due to abandonments were not analyzed.

REFERENCES

Abacus Technology Corp., 1991. Rail versus Truck Fuel Efficiency; the Relative Fuel Efficiency of Truck Competitive Rail Freight and Truck Operations Compared in a Range of Corridors, Final Report (April).

Reebie and Associates and Transmode, Truck to Rail Diversion Study, 1995.

Dames & Moore has received data from appropriate UP and SP officials which was used in the preparation of this report.

SECTION G

RARE, THREATENED AND ENDANGERED SPECIES

ADDITIONAL INFORMATION ON RARE, THREATENED, AND ENDANGERED SPECIES IN THE AREA OF CONSTRUCTION SITES IN ARIZONA

Location	Known and Potential Occurrence of Rare, Threatened, and Endangered Species in the Area
Casa Grande	Arizona hedgehog cactus Nichol's turk's head cactus Acuna cactus Lesser long-nosed bat Desert pupfish Gila topminnow Loach minnow Razorback sucker American peregrine falcon Bald eagle Southwestern willow flycatcher Cactus ferruginous pygmy owl
Lordsburg to Uimoris	
Razo to Luzena	Cochise pincushion cactus Jaguarundi Mexican gray wolf Ocelot Jaguar American peregrine falcon Northern aplomado falcon Southwestern willow flycatcher Whooping crane
Rillito	Nichol's turk's head cactus Pima pineapple cactus Huachuca water umbel Acuna cactus Gentry indigo bush Jaguarundi Ocelot Jaguar Lesser long-nosed bat Mexican gray wolf Sonoran pronghorn American peregrine falcon Bald eagle Southwestern willow flycatcher Cactus ferruginous pygmy owl
Sentinel	Arizona agave Arizona cliffrose Arizona hedgehog cactus Lesser long-nosed bat Sonoran pronghorn American peregrine falcon Bald eagle Southwestern willow flycatcher Cactus ferruginous pygmy owl

ADDITIONAL INFORMATION ON RARE, THREATENED, AND ENDANGERED SPECIES IN THE AREA OF CONSTRUCTION SITES IN ARIZONA
(concluded)

Location	Known and Potential Occurrence of Rare, Threatened, and Endangered Species in the Area
Wilcox to Razo	Cochise pincushion cactus Northern aplomado falcon Whooping crane Jaguar

Desert pupfish (*Cyprinodon macularius*)
Federal status: Endangered
Critical habitat along segment: - NO
Remote possibility of occurrence in canal

Arizona

Gila topminnow (*Poeciliopsis occidentalis occidentalis*)
Federal status: Endangered
Cirtical habitat - NO
Remote possibility of occurrence in canal

Loach minnow (*Tiaroga cobitis*)
Federal status: Threatened
Critical habitat along segment: - NO
Remote possibility of occurrence in canal

Razorback sucker (*Xyrauchen texanus*)
Federal status: Endangered
Critical habitat along segment: - NO
Remote possibility of occurrence in canal

Birds:

American peregrine falcon (*Falco peregrinus anatum*)
Federal status: Endangered
Critical habitat along segment: - NO
Preferred habitat not present along segment, but may migrate through the area

Bald eagle (*Haliaeetus leucocephalus*)
Federal status: Threatened
Critical habitat along segment: - NO
Preferred habitat not present along segment, but may migrate through the area

Southwestern Willow flycatcher (*Empidonax traillii extimus*)
Federal status: Endangered
Critical habitat along segment: - NO
Accidental occurrence possible, but preferred riparian habitat not present along segment

Cactus Ferruginous pygmy owl (*Glaucidium brasilianum cactorum*)
Federal status: Proposed endangered
Critical habitat along segment: - No
Probably does not occur in habitat type along segment

Northern Aplomado falcon (*Falco femoralis septentrionalis*)
Federal status: Endangered
Critical habitat along segment: along segment - No
Potentially could be found in habitat along segment

Whooping crane (*Grus americana*)
Federal status: Endangered
Critical habitat along segment: - NO
Could pass through this habitat on way to Wilcox Playa

Lesser Long-Nosed Bat (*Leptonycteris curasoae yerbabuenae*) Arizona
Federal status: Endangered
Critical habitat along segment: - NO
Present April to September and could occur in habitat along segment

Sonoran pronghorn (*Antilocapra americana sonoriensis*)
Federal status: Endangered

Jaguarundi (*Felis yagouaroundi tolteca*)
Federal status: Endangered
Critical habitat along segment: - NO
Could occur occasionally in habitat along segment

Mexican Gray wolf (*Canis lupus baileyi*)
Federal status: Endangered
Critical habitat along segment: - NO
May cross habitat along segment

Ocelot (*Felis pardalis*)
Federal status: Endangered
Critical habitat along segment: - NO
Probably does not occur in habitat along segment

Sonoran pronghorn (*Antilocapra americana sonoriensis*)
Federal status: Endangered
Critical habitat along segment: - NO
Probably does not occur in habitat along segment

Jaguar (*Panthera onca*)
Federal status: Proposed endangered
Critical habitat along segment: - NO
Could pass through habitat along segment, but unlikely

Plants:

Arizona Agave (*Agave arizonica*)
Federal status: Endangered
Critical habitat along segment: - NO
Unlikely to find in type of habitat along segment

Arizona cliffrose (*Purshia subintegra*)
Federal status: Endangered
Critical habitat along segment: - NO
Unlikely to find in type of habitat along segment

Arizona hedgehog cactus (*Echinocereus triglochidiatus arizonicus*)
Federal status: Endangered
Critical habitat along segment: - NO
Not usually found in type of habitat along segment

Plants:

Nichol's Turk's head cactus (*Echinocactus horizonthalonius var nicholii*)
Federal status: Endangered
Critical habitat along segment: - NO
Probably does not occur in habitat along segment

Pima Pineapple cactus (*Coryphantha scheeri robustispina*)
Federal status: Endangered
Critical habitat along segment: - NO
Could occur in habitat along segment

Huachuca water umbel (*Lilaeopsis schaffneriana ssp. recurva*)
Federal status: Proposed endangered
Critical habitat along segment: - NO
Probably does not occur along segment

Cochise pincushion cactus (*Coryphantha robbinsorum*)
Federal status: Threatened
Critical habitat along segment: - NO
Could occur in habitat along segment

Acuna cactus (*Echinomastus erectocentrus acunensis*)
Federal status: Category 1
Critical habitat along segment: - NO
Could occur in habitat along this segment

Gentry Indigo bush (*Dalea tentaculoides*)
Federal status. Category 1
Critical habitat along segment: - NO
Unlikely that it occurs along segment

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: *MARICOPA*

LISTED TOTAL= 13

Arizona

NAME: ARIZONA AGAVE *AGAVE ARIZONICA*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: No CFR: 49 FR 21055, 05-18-1984

DESCRIPTION: HAS ATTRACTIVE ROSETTES OF BRIGHT GREEN LEAVES WITH DARK MAHOGANY MARGINS. FLOWER: BORNE ON SUB-UMBELLATE INFLORESCENCES.

ELEVATION RANGE: 3000-6000 FT.

COUNTIES: GILA, YAVAPAI, MARICOPA

HABITAT: TRANSITION ZONE BETWEEN OAK-JUNIPER WOODLAND & MOUNTAIN MAHOGANY-OAK SCRUB

SCATTERED CLONES IN NEW RIVER MOUNTAINS AND SIERRA ANCHA. USUALLY FOUND ON STEEP, ROCKY SLOPES. POSSIBLY MAZATAL MOUNTAINS SHOULD BE LOOKED FOR WHEREVER THE RANGES OF Agave toumeyana var. bella AND Agave chrystantha OVERLAP.

NAME: ARIZONA CLIFFROSE *PURSHIA SUBINTEGRA*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: Yes CFR: 49 FR 22326 5-29-84

DESCRIPTION: EVERGREEN SHRUB OF THE ROSE FAMILY (ROSEACEAE). BARK PALE SHREDDY. YOUNG TWIGS WITH DENSE HAIRS. LEAVES 1-5 LOBES AND EDGES CURL DOWNWARD (REVOLUTE). FLOWERS: 5 WHITE OR YELLOW PETALS <0.5 INCH LONG.

ELEVATION RANGE: <4000 FT.

COUNTIES: GRAHAM YAVAPAI MARICOPA MOHAVE

HABITAT: CHARACTERISTIC WHITE SOILS OF TERTIARY LIMESTONE LAKEBED DEPOSITS CAN BE SEEN FROM A DISTANCE.

NAME: ARIZONA HEDGEHOG CACTUS *ECHINOCEREUS TRIGLOCHIDIATUS ARIZONICUS*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: No CFR: 44 FR 61556,10-15-1979

DESCRIPTION: DARK GREEN CYLINDROID 2.5-12 INCHES TALL, 2-10 INCHES IN DIAMETER, SINGLE OR IN CLUSTERS. 1-3 GRAY OR PINKISH CENTRAL SPINES LARGEST DEFLEXED AND 5-11 SHORTER RADIAL SPINES. FLOWER: BRILLIANT RED. SIDE OF STEM IN APRIL- MAY

ELEVATION RANGE: 3700-5200 FT.

COUNTIES: MARICOPA, GILA, PINAL

HABITAT: ECOTONE BETWEEN INTERIOR CHAPPARAL AND MADREAN EVERGREEN WOODLAND

OPEN SLOPES, IN NARROW CRACKS BETWEEN BOULDERS, AND IN UNDERSTORY OF SHRUBS. THIS VARIETY IS BELIEVED TO INTERGRADE AT THE EDGES OF ITS DISTRIBUTION WITH VARIETIES MELANCANTHUS AND NEOMEXICANUS CAUSING SOME CONFUSION IN IDENTIFICATION.

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: "MARICOPA"

NAME: **LESSER LONG-NOSED BAT** *LEPTONYCTERIS CURASOAE YERBABUENAE*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: No CFR: 53 FR 38456, 09-30-88

DESCRIPTION: ELONGATED MUZZLE, SMALL LEAF NOSE, AND LONG TONGUE. YELLOWISH BROWN OR GRAY ABOVE AND CINNAMON BROWN BELOW. TAIL MINUTE AND APPEARS TO BE LACKING. EASILY DISTURBED.

ELEVATION RANGE: <6000 FT.

COUNTIES: COCHISE, PIMA, SANTA CRUZ, GRAHAM, PINAL, MARICOPA

HABITAT: DESERT SCRUB HABITAT WITH AGAVE AND COLUNMNAR CACTI PRESENT AS FOOD PLANTS

DAY ROOSTS IN CAVES AND ABANDONED TUNNELS. FORAGES AT NIGHT ON NECTAR, POLLEN, AND FRUIT OF PANICULATE AGAVES AND COLUMNAR CACTI. THIS SPECIES IS MIGRATORY AND IS PRESENT IN ARIZONA, USUALLY FROM APRIL TO SEPTMBER AND SOUTH OF THE BORDER THE REMAINDER OF THE YEAR.

NAME: **SONORAN PRONGHORN** *ANTILOCAPRA AMERICANA SONORIENSIS*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: Yes CFR: 32 FR 4001, 03-11-67

DESCRIPTION: BUFF ON BACK AND WHITE BELOW, HOOFED WITH SLIGHTLY CURVED BLACK HORNS HAVING A SINGLE PRONG. SMALLEST AND PALEST OF THE PRONGHORN SUBSPECIES.

ELEVATION RANGE: 2000-4000 FT.

COUNTIES: PIMA, YUMA, MARICOPA

HABITAT: BROAD, INTERMOUNTAIN ALLUVIAL VALLEYS WITH CREOSOTE-BURSAGE & PALO VERDE-MIXED CACTI ASSOCIATIONS

TYPICALLY, BAJADAS ARE USED AS FAWNING AREAS AND SANDY DUNE AREAS PROVIDE FOOD SEASONALLY. HISTORIC RANGE WAS PROBABLY LARGER THAN EXISTS TODAY. THIS SUBSPECIES ALSO OCCURS IN MEXICO.

NAME: **DESERT PUPFISH** *CYPRINODON MACULARIUS*

STATUS: ENDANGERED CRITICAL HABITAT: Yes RECOVERY PLAN: Yes CFR: 51 FR 10842, 03-31-1986

DESCRIPTION: SMALL (2 INCHES) SMOOTHLY ROUNDED BODY SHAPE WITH NARROW VERTICAL BARS ON THE SIDES. BREEDING MALES BLUE ON HEAD AND SIDES WITH YELLOW ON TAIL. FEMALES & JUVENILES TAN TO OLIVE COLORED BACK AND SILVERY SIDES.

ELEVATION RANGE: <5000 FT.

COUNTIES: LA PAZ, PIMA, GRAHAM, MARICOPA, PINAL, YAVAPAI, SANTA CRUZ

HABITAT: SHALLOW SPRINGS, SMALL STREAMS, AND MARSHES. TOLERATES SALINE & WARM WATER

CRITICAL HABITAT INCLUDES QUITOBAQUITO SPRING, PIMA COUNTY, PORTIONS OF SAN FELIPE CREEK, CARRIZO WASH, AND FISH CREEK WASH, IMPERIAL COUNTY, CALIFORNIA. TWO SUBSPECIES ARE RECOGNIZED: DESERT PUPFISH (C. m. macularis) AND QUITOBAQUITO PUPFISH (C. m. eremus).

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: *MARICOPA*

Arizona

NAME: **GILA TOPMINNOW** *POECILIOPSIS OCCIDENTALIS OCCIDENTALIS*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: Yes CFR: 32 FR 4001, 03-11-1967

DESCRIPTION: SMALL (2 INCHES), GUPPY-LIKE, LIVE BEARING, LACKS DARK SPOTS ON ITS FINS. BREEDING MALES ARE JET BLACK WITH YELLOW FINS.

ELEVATION RANGE: <4500 FT.

COUNTIES: GILA, PINAL, GRAHAM, YAVAPAI, SANTA CRUZ, PIMA, MARICOPA, LA PAZ

HABITAT: SMALL STREAMS, SPRINGS, AND CIENEGAS VEGETATED SHALLOWS

NAME: **RAZORBACK SUCKER** *XYRAUCHEN TEXANUS*

STATUS: ENDANGERED CRITICAL HABITAT: Yes RECOVERY PLAN: No CFR: 55 FR 21154, 05-22-1990; 59 FR 13374, 03-21-1994

DESCRIPTION: LARGE (UP TO 3 FEET AND UP TO 16 POUNDS) LONG, HIGH SHARP-EDGED KEEL-LIKE HUMP BEHIND THE HEAD. HEAD FLATTENED ON TOP. OLIVE-BROWN ABOVE TO YELLOWISH BELOW.

ELEVATION RANGE: <6000 FT.

COUNTIES: GREENLEE, MOHAVE, PINAL, YAVAPAI, YUMA, LA PAZ, MARICOPA (REFUGIA), GILA, COCONINO, GRAHAM

HABITAT: RIVERINE & LACUSTRINE AREAS, GENERALLY NOT IN FAST MOVING WATER AND MAY USE BACKWATERS

SPECIES IS ALSO FOUND IN HORSESHOE RESERVOIR (MARICOPA COUNTY).

NAME: **AMERICAN PEREGRINE FALCON** *FALCO PEREGRINUS ANATUM*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: Yes CFR: 35 FR 16047, 10-13-70; 35 FR 8495, 06-02-70

DESCRIPTION: A RECLUSIVE, CROW-SIZED FALCON SLATY BLUE ABOVE WHITISH BELOW WITH FINE DARK BARRING. THE HEAD IS BLACK AND APPEARS TO BE MASKED OR HELMETED. WINGS LONG AND POINTED. LOUD WAILING CALLS ARE GIVEN DURING BREEDING PERIOD.

ELEVATION RANGE: 3500-9000 FT.

COUNTIES: MOHAVE COCONINO NAVAJO APACHE SANTA CRUZ MARICOPA COCHISE YAVAPAI GILA PINAL PIMA GREENLEE GRAHAM

HABITAT: CLIFFS AND STEEP TERRAIN USUALLY NEAR WATER OR WOODLANDS WITH ABUNDANT PREY

THIS IS A WIDE RANGING MIGRATORY BIRD THAT USES A VARIETY OF HABITATS. BREEDING BIRDS ARE YEAR-ROUND RESIDENTS. OTHER BIRDS WINTER AND MIGRATE THROUGH ARIZONA. SPECIES IS ENDANGERED FROM REPRODUCTIVE FAILURE FROM PESTICIDES.

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: "MARICOPA"

NAME: **BALD EAGLE** *HALIAEETUS LEUCOCEPHALUS*

STATUS: THREATENED CRITICAL HABITAT: No RECOVERY PLAN: Yes CFR: 60 FR 35999, 07-12-95

DESCRIPTION: LARGE, ADULTS HAVE WHITE HEAD AND TAIL. HEIGHT 28 - 38"; WINGSPAN 66 - 96". 1-4 YRS DARK WITH VARYING DEGREES OF MOTTLED BROWN PLUMAGE. FEET BARE OF FEATHERS.

ELEVATION RANGE: VARIES FT.

COUNTIES: YUMA, LA PAZ, MOHAVE, YAVAPAI, MARICOPA, PINAL, COCONINO, NAVAJO, APACHE, SANTA CRUZ, PIMA, GILA, GRAHAM

HABITAT: LARGE TREES OR CLIFFS NEAR WATER (RESERVOIRS, RIVERS AND STREAMS) WITH ABUNDANT PREY

SOME BIRDS ARE NESTING RESIDENTS WHILE A LARGER NUMBER WINTERS ALONG RIVERS AND RESERVOIRS. AN ESTIMATED 200 TO 300 BIRDS WINTER IN ARIZONA. ONCE ENDANGERED (32 FR 4001, 03-11-1967; 43 FR 6233, 02-14-78) BECAUSE OF REPRODUCTIVE FAILURES FROM PESTICIDE POISONING AND LOSS OF HABITAT, THIS SPECIES WAS DOWN LISTED TO THREATENED ON AUGUST 11, 1995. ILLEGAL SHOOTING, DISTURBANCE, LOSS OF HABITAT CONTINUES TO BE A PROBLEM.

NAME: **MEXICAN SPOTTED OWL** *STRIX OCCIDENTALIS LUCIDA*

STATUS: THREATENED CRITICAL HABITAT: Yes RECOVERY PLAN: Yes CFR: 56 FR 14678, 04-11-91

DESCRIPTION: MEDIUM SIZED WITH DARK EYES AND NO EAR TUFTS. BROWNISH AND HEAVILY SPOTTED WITH WHITE OR BEIGE.

ELEVATION RANGE: 4100-9000 FT.

COUNTIES: MOHAVE, COCONINO, NAVAJO, APACHE, YAVAPAI, GRAHAM, GREENLEE, COCHISE, SANTA CRUZ, PIMA, PINAL, GILA, MARICOPA

HABITAT: NESTS IN CANYONS AND DENSE FORESTS WITH MULTI-LAYERED FOLIAGE STRUCTURE

GENERALLY NESTS IN OLDER FORESTS OF MIXED CONIFER OR PONDERSA PINE/GAMBEL OAK TYPE, IN CANYONS, AND USE VARIETY OF HABITATS FOR FORAGING. SITES WITH COOL MICROCLIMATES APPEAR TO BE OF IMPORTANCE OR ARE PREFERED.

NAME: **SOUTHWESTERN WILLOW FLYCATCHER** *EMPIDONAX TRAILLII EXTIMUS*

STATUS: ENDANGERED CRITICAL HABITAT: Yes RECOVERY PLAN: No CFR: 60 FR 10694, 02-27-95

DESCRIPTION: SMALL PASSERINE (ABOUT 6") GRAYISH-GREEN BACK AND WINGS, WHITISH THROAT, LIGHT OLIVE-GRAY BREAST AND PALE YELLOWISH BELLY. TWO WINGBARS VISIBLE. EYE-RING FAINT OR ABSENT.

ELEVATION RANGE: <8500 FT.

COUNTIES: YAVAPAI, GILA, MARICOPA, MOHAVE, COCONINO, NAVAJO, APACHE, PINAL, LA PAZ, GREENLEE, GRAHAM, YUMA, PIMA, COCHISE, SANTA CRUZ

HABITAT: COTTONWOOD/WILLOW & TAMARISK VEGETATION COMMUNITIES ALONG RIVERS & STREAMS

MIGRATORY RIPARIAN OBLIGATE SPECIES THAT OCCUPIES BREEDING HABITAT FROM LATE APRIL TO SEPTEMBER. DISTRIBUTION WITHIN ITS RANGE IS RESTRICTED TO RIPARIAN CORRIDORS. DIFFICULT TO DISTINGUISH FROM OTHER MEMBERS OF THE EMPIDONAX COMPLEX BY SIGHT ALONE. TRAINING SEMINAR REQUIRED FOR THOSE CONDUCTING FLYCATCHER SURVEYS.

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: "MARICOPA"

Arizona

NAME: **YUMA CLAPPER RAIL** *RALLUS LONGIROSTRIS YUMANENSIS*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: Yes CFR: 32 FR 4001, 03-11-67; 48 FR 34182, 07-27-83

DESCRIPTION: WATER BIRD WITH LONG LEGS AND SHORT TAIL. LONG SLENDER DECURVED BILL. MOTTLED BROWN ON GRAY ON ITS RUMP. FLANKS AND UNDERSIDES ARE DARK GRAY WITH NARROW VERTICAL STRIPES PRODUCING A BARRING EFFECT.

ELEVATION RANGE: <4500 FT.

COUNTIES: YUMA, LA PAZ, MARICOPA, PINAL, MOHAVE

HABITAT: FRESH WATER AND BRACKISH MARSHES

SPECIES IS ASSOCIATED WITH DENSE EMERGENT RIPARIAN VEGETATION. REQUIRES WET SUBSTRATE (MUDFLAT, SANDBAR) WITH DENSE HERBACEOUS OR WOODY VEGETATION FOR NESTING AND FORAGING. CHANNELIZATION AND MARSH DEVELOPMENT ARE PRIMARY SOURCES OF HABITAT LOSS.

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: "MARICOPA"

PROPOSED TOTAL= 1

NAME: CACTUS FERRUGINOUS PYGMY-OWL *GLAUCIDIUM BRASILIANUM CACTORUM*

STATUS: PROPOSED ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: No CFR: 59 FR 63975, 12-12-94

DESCRIPTION: SMALL (APPROX. 7"), DIURNAL OWL REDDISH BROWN OVERALL WITH CREAM-COLORED BELLY STREAKED WITH REDDISH BROWN. SOME INDIVIDUALS ARE GRAYISH BROWN

ELEVATION RANGE: <4000 FT.

COUNTIES: MARICOPA, YUMA, SANTA CRUZ, GRAHAM, GREENLEE, PIMA, PINAL, GILA, YAVAPAI

HABITAT: MATURE COTTONWOOD/WILLOW, MESQUITE BOSQUES, AND DESERT SCRUB

RANGE LIMIT IN ARIZONA IS FROM NEW RIVER (NORTH) TO GILA BOX (EAST) TO CABEZA PRIETA MOUNTAINS (WEST). ONLY A FEW DOCUMENTED SITES WHERE THIS SPECIES PERSISTS ARE KNOWN. ADDITIONAL SURVEYS ARE NEEDED. CRITICAL HABITAT HAS BEEN PROPOSED FOR THIS SPECIES.

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: "pinal"

Arizona

LISTED TOTAL= 13

NAME: **ARIZONA HEDGEHOG CACTUS** *ECHINOCEREUS TRIGLOCHIDIATUS ARIZONICUS*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: No CFR: 44 FR 61556,10-15-1979

DESCRIPTION: DARK GREEN CYLINDROID 2.5-12 INCHES TALL, 2-10 INCHES IN DIAMETER. SINGLE OR IN CLUSTERS. 1-3 GRAY OR PINKISH CENTRAL SPINES LARGEST DEFLEXED AND 5-11 SHORTER RADIAL SPINES. FLOWER: BRILLIANT RED, SIDE OF STEM IN APRIL- MAY

ELEVATION RANGE: 3700-5200 FT.

COUNTIES: MARICOPA, GILA, PINAL

HABITAT: ECOTONE BETWEEN INTERIOR CHAPPARAL AND MADREAN EVERGREEN WOODLAND

OPEN SLOPES, IN NARROW CRACKS BETWEEN BOULDERS, AND IN UNDERSTORY OF SHRUBS. THIS VARIETY IS BELIEVED TO INTERGRADE AT THE EDGES OF ITS DISTRIBUTION WITH VARIETIES MELANCANTHUS AND NEOMEXICANUS CAUSING SOME CONFUSION IN IDENTIFICATION.

NAME: **NICHOL'S TURK'S HEAD CACTUS** *ECHINOCACTUS HORIZONTHALONIUS VAR NICHOLII*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: No CFR: 44 FR 61927, 10-26-1979

DESCRIPTION: BLUE-GREEN TO YELLOWISH-GREEN, COLUMNAR, 18 INCHES TALL, 8 INCHES IN DIAMETER. SPINE CLUSTERS HAVE 5 RADIAL & 3 CENTRAL SPINES; ONE DOWNWARD SHORT; 2 SPINES UPWARD AND RED OR BASALLY GRAY. FLOWER:PINK FRUIT:WOOLLY WHITE

ELEVATION RANGE: 2400-4100 FT.

COUNTIES: PINAL, PIMA, YUMA

HABITAT: SONORAN DESERTSCRUB

FOUND IN UNSHADED MICROSITES IN SONORAN DESERTSCRUB ON DISSECTED ALLUVIAL FANS AT THE FOOT OF LIMESTONE MOUNTAINS AND ON INCLINED TERRACES AND SADDLES ON LIMESTONE MOUNTAINSIDES. NEW POPULATION ON YUMA PROVING GROUNDS.

NAME: **LESSER LONG-NOSED BAT** *LEPTONYCTERIS CURASOAE YERBABUENAE*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: No CFR: 53 FR 38456, 09-30-88

DESCRIPTION: ELONGATED MUZZLE, SMALL LEAF NOSE, AND LONG TONGUE. YELLOWISH BROWN OR GRAY ABOVE AND CINNAMON BROWN BELOW. TAIL MINUTE AND APPEARS TO BE LACKING. EASILY DISTURBED.

ELEVATION RANGE: <6000 FT.

COUNTIES: COCHISE, PIMA, SANTA CRUZ, GRAHAM, PINAL, MARICOPA

HABITAT: DESERT SCRUB HABITAT WITH AGAVE AND COLUNMNAR CACTI PRESENT AS FOOD PLANTS

DAY ROOSTS IN CAVES AND ABANDONED TUNNELS. FORAGES AT NIGHT ON NECTAR, POLLEN, AND FRUIT OF PANICULATE AGAVES AND COLUMNAR CACTI. THIS SPECIES IS MIGRATORY AND IS PRESENT IN ARIZONA , USUALLY FROM APRIL TO SEPTMBER AND SOUTH OF THE BORDER THE REMAINDER OF THE YEAR.

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: "pinal"

NAME: **DESERT PUPFISH** *CYPRINODON MACULARIUS*

STATUS: ENDANGERED CRITICAL HABITAT: Yes RECOVERY PLAN: Yes CFR: 51 FR 10842, 03-31-1986

DESCRIPTION: SMALL (2 INCHES) SMOOTHLY ROUNDED BODY SHAPE WITH NARROW VERTICAL BARS ON THE SIDES. BREEDING MALES BLUE ON HEAD AND SIDES WITH YELLOW ON TAIL. FEMALES & JUVENILES TAN TO OLIVE COLORED BACK AND SILVERY SIDES.

ELEVATION RANGE: <5000 FT.

COUNTIES: LA PAZ, PIMA, GRAHAM, MARICOPA, PINAL, YAVAPAI, SANTA CRUZ

HABITAT: SHALLOW SPRINGS, SMALL STREAMS, AND MARSHES. TOLERATES SALINE & WARM WATER

CRITICAL HABITAT INCLUDES QUITOBAQUITO SPRING, PIMA COUNTY, PORTIONS OF SAN FELIPE CREEK, CARRIZO WASH, AND FISH CREEK WASH, IMPERIAL COUNTY, CALIFORNIA. TWO SUBSPECIES ARE RECOGNIZED: DESERT PUPFISH (C. m. maculans) AND QUITOBAQUITO PUPFISH (C. m. eremus).

NAME: **GILA TOPMINNOW** *POECILIOPSIS OCCIDENTALIS OCCIDENTALIS*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: Yes CFR: 32 FR 4001, 03-11-1967

DESCRIPTION: SMALL (2 INCHES), GUPPY-LIKE, LIVE BEARING, LACKS DARK SPOTS ON ITS FINS. BREEDING MALES ARE JET BLACK WITH YELLOW FINS.

ELEVATION RANGE: <4500 FT.

COUNTIES: GILA, PINAL, GRAHAM, YAVAPAI, SANTA CRUZ, PIMA, MARICOPA, LA PAZ

HABITAT: SMALL STREAMS, SPRINGS, AND CIENEGAS VEGETATED SHALLOWS

NAME: **LOACH MINNOW** *TIAROGA COBITIS*

STATUS: THREATENED CRITICAL HABITAT: Yes RECOVERY PLAN: Yes CFR: 51 FR 39468, 10-28-1986; 59 FR 10898, 03-08-1994

DESCRIPTION: SMALL (<3 INCHES LONG) SLENDER, ELONGATED FISH, OLIVE COLORED WITH DIRTY WHITE SPOTS AT THE BASE OF THE DORSAL AND CAUDAL FINS. BREEDING MALES VIVID RED ON MOUTH AND BASE OF FINS

ELEVATION RANGE: <7000 FT.

COUNTIES: PINAL, GRAHAM, GREENLEE, GILA, APACHE, NAVAJO, (AZ); GRANT, CATRON, (NM)

HABITAT: BENTHIC SPECIES OF SMALL TO LARGE PERENNIAL STREAMS WITH SWIFT SHALLOW WATER OVER COBBLE& GRAVEL

CRITICAL HABITAT IS IN ARAVAIPA CREEK, BLUE RIVER, CAMPBELL BLUE CREEK, SAN FRANCISCO RIVER, DRY BLUE CREEK, TULAROSA RIVER, EAST WEST AND MIDDLE FORKS OF THE GILA RIVER, AND THE MAINSTEM UPPER GILA RIVER. PRESENTLY FOUND IN ALL CRITICAL HABITAT PLUS WHITE RIVER AND EAGLE CREEKS.

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: "pinal"

Arizona

NAME: **RAZORBACK SUCKER** *XYRAUCHEN TEXANUS*

STATUS: ENDANGERED CRITICAL HABITAT: Yes RECOVERY PLAN: No CFR: 55 FR 21154, 05-22-1990; 59 FR 13374, 03-21-1994

DESCRIPTION: LARGE (UP TO 3 FEET AND UP TO 16 POUNDS) LONG, HIGH SHARP-EDGED KEEL-LIKE HUMP BEHIND THE HEAD. HEAD FLATTENED ON TOP. OLIVE-BROWN ABOVE TO YELLOWISH BELOW.

ELEVATION RANGE: <6000 FT.

COUNTIES: GREENLEE, MOHAVE, PINAL, YAVAPAI, YUMA, LA PAZ, MARICOPA (REFUGIA), GILA, COCONINO, GRAHAM

HABITAT: RIVERINE & LACUSTRINE AREAS, GENERALLY NOT IN FAST MOVING WATER AND MAY USE BACKWATERS

SPECIES IS ALSO FOUND IN HORSESHOE RESERVOIR (MARICOPA COUNTY).

NAME: **SPIKEDACE** *MEDA FULGIDA*

STATUS: THREATENED CRITICAL HABITAT: Yes RECOVERY PLAN: Yes CFR: 51 FR 23769,07-01-1986; 59 FR 10906, 03-08-1994

DESCRIPTION: SMALL (<3 INCHES) SLIM WITH SLIVERY SIDES & "SPINE" ON DORSAL FIN. BREDING MALES BRASSY GOLDEN COLOR

ELEVATION RANGE: <6000 FT.

COUNTIES: GRAHAM, PINAL, GREENLEE, YAVAPAI, (AZ); GRANT, (NM)

HABITAT: MODERATE TO LARGE PERENNIAL STREAMS WITH GRAVEL COBBLE SUBSTRATES AND MODERATE TO SWIFT VELOCITIES

CRITICAL HABITAT IN ARAVAIPA CREEK, UPPER VERDE RIVER, AND PORTIONS OF GILA RIVER IN NEW MEXICO PRESENTLY FOUND IN ARAVAIPA CREEK, EAGLE CREEK, VERDE RIVER ABOVE VERDE VALLEY, EAST-WEST- MAIN AND MIDDLE FORKS OF THE GILA RIVER IN NEW MEXICO, AND GILA RIVER FROM SAN PEDRO RIVER TO ASHURST HAYDEN DAM.

NAME: **AMERICAN PEREGRINE FALCON** *FALCO PEREGRINUS ANATUM*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: Yes CFR: 35 FR 16047, 10-13-70; 35 FR 8495, 06-02-70

DESCRIPTION: A RECLUSIVE, CROW-SIZED FALCON SLATY BLUE ABOVE WHITISH BELOW WITH FINE DARK BARRING. THE HEAD IS BLACK AND APPEARS TO BE MASKED OR HELMETED. WINGS LONG AND POINTED. LOUD WAILING CALLS ARE GIVEN DURING BREEDING PERIOD.

ELEVATION RANGE: 3500-9000 FT.

COUNTIES: MOHAVE COCONINO NAVAJO APACHE SANTA CRUZ MARICOPA COCHISE YAVAPAI GILA PINAL PIMA GREENLEE GRAHAM

HABITAT: CLIFFS AND STEEP TERRAIN USUALLY NEAR WATER OR WOODLANDS WITH ABUNDANT PREY

THIS IS A WIDE-RANGING MIGRATORY BIRD THAT USES A VARIETY OF HABITATS. BREEDING BIRDS ARE YEAR-ROUND RESIDENTS. OTHER BIRDS WINTER AND MIGRATE THROUGH ARIZONA. SPECIES IS ENDANGERED FROM REPRODUCTIVE FAILURE FROM PESTICIDES.

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: "pinal"

NAME: **BALD EAGLE** *HALIAEETUS LEUCOCEPHALUS*

STATUS: THREATENED CRITICAL HABITAT: No RECOVERY PLAN: Yes CFR: 60 FR 35999, 07-12-95

DESCRIPTION: LARGE. ADULTS HAVE WHITE HEAD AND TAIL. HEIGHT 28 - 38"; WINGSPAN 66 - 96". 1-4 YRS DARK WITH VARYING DEGREES OF MOTTLED BROWN PLUMAGE. FEET BARE OF FEATHERS.

ELEVATION RANGE: VARIES FT.

COUNTIES: YUMA, LA PAZ, MOHAVE, YAVAPAI, MARICOPA, PINAL, COCONINO, NAVAJO, APACHE, SANTA CRUZ, PIMA, GILA, GRAHAM

HABITAT: LARGE TREES OR CLIFFS NEAR WATER (RESERVOIRS, RIVERS AND STREAMS) WITH ABUNDANT PREY

SOME BIRDS ARE NESTING RESIDENTS WHILE A LARGER NUMBER WINTERS ALONG RIVERS AND RESERVOIRS. AN ESTIMATED 200 TO 300 BIRDS WINTER IN ARIZONA. ONCE ENDANGERED (32 FR 4001, 03-11-1967; 43 FR 6233, 02-14-78) BECAUSE OF REPRODUCTIVE FAILURES FROM PESTICIDE POISONING AND LOSS OF HABITAT. THIS SPECIES WAS DOWN LISTED TO THREATENED ON AUGUST 11, 1995. ILLEGAL SHOOTING, DISTURBANCE, LOSS OF HABITAT CONTINUES TO BE A PROBLEM.

NAME: **MEXICAN SPOTTED OWL** *STRIX OCCIDENTALIS LUCIDA*

STATUS: THREATENED CRITICAL HABITAT: Yes RECOVERY PLAN: Yes CFR: 56 FR 14678, 04-11-91

DESCRIPTION: MEDIUM SIZED WITH DARK EYES AND NO EAR TUFTS. BROWNISH AND HEAVILY SPOTTED WITH WHITE OR BEIGE.

ELEVATION RANGE: 4100-9000 FT.

COUNTIES: MOHAVE, COCONINO, NAVAJO, APACHE, YAVAPAI, GRAHAM, GREENLEE, COCHISE, SANTA CRUZ, PIMA, PINAL, GILA, MARICOPA

HABITAT: NESTS IN CANYONS AND DENSE FORESTS WITH MULTI-LAYERED FOLIAGE STRUCTURE

GENERALLY NESTS IN OLDER FORESTS OF MIXED CONIFER OR PONDERSA PINE/GAMBEL OAK TYPE, IN CANYONS, AND USE VARIETY OF HABITATS FOR FORAGING. SITES WITH COOL MICROCLIMATES APPEAR TO BE OF IMPORTANCE OR ARE PREFERED.

NAME: **SOUTHWESTERN WILLOW FLYCATCHER** *EMPIDONAX TRAILLII EXTIMUS*

STATUS: ENDANGERED CRITICAL HABITAT: Yes RECOVERY PLAN: No CFR: 60 FR 10694, 02-27-95

DESCRIPTION: SMALL PASSERINE (ABOUT 6") GRAYISH-GREEN BACK AND WINGS, WHITISH THROAT, LIGHT OLIVE-GRAY BREAST AND PALE YELLOWISH BELLY. TWO WINGBARS VISIBLE. EYE-RING FAINT OR ABSENT.

ELEVATION RANGE: <8500 FT.

COUNTIES: YAVAPAI, GILA, MARICOPA, MOHAVE, COCONINO, NAVAJO, APACHE, PINAL, LA PAZ, GREENLEE, GRAHAM, YUMA, PIMA, COCHISE, SANTA CRUZ

HABITAT: COTTONWOOD/WILLOW & TAMARISK VEGETATION COMMUNITIES ALONG RIVERS & STREAMS

MIGRATORY RIPARIAN OBLIGATE SPECIES THAT OCCUPIES BREEDING HABITAT FROM LATE APRIL TO SEPTEMBER. DISTRIBUTION WITHIN ITS RANGE IS RESTRICTED TO RIPARIAN CORRIDORS. DIFFICULT TO DISTINGUISH FROM OTHER MEMBERS OF THE EMPIDONAX COMPLEX BY SIGHT ALONE. TRAINING SEMINAR REQUIRED FOR THOSE CONDUCTING FLYCATCHER SURVEYS.

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: "pinal"

Arizona

NAME: **YUMA CLAPPER RAIL** *RALLUS LONGIROSTRIS YUMANENSIS*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: Yes CFR: 32 FR 4001, 03-11-67; 48 FR 34182, 07-27-83

DESCRIPTION: WATER BIRD WITH LONG LEGS AND SHORT TAIL. LONG SLENDER DECURVED BILL. MOTTLED BROWN ON GRAY ON ITS RUMP. FLANKS AND UNDERSIDES ARE DARK GRAY WITH NARROW VERTICAL STRIPES PRODUCING A BARRING EFFECT.

ELEVATION RANGE: <4500 FT.

COUNTIES: YUMA, LA PAZ, MARICOPA, PINAL, MOHAVE

HABITAT: FRESH WATER AND BRACKISH MARSHES

SPECIES IS ASSOCIATED WITH DENSE EMERGENT RIPARIAN VEGETATION. REQUIRES WET SUBSTRATE (MUDFLAT, SANDBAR) WITH DENSE HERBACEOUS OR WOODY VEGETATION FOR NESTING AND FORAGING. CHANNELIZATION AND MARSH DEVELOPMENT ARE PRIMARY SOURCES OF HABITAT LOSS.

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: "pinal"

PROPOSED TOTAL= 1

NAME: CACTUS FERRUGINOUS PYGMY-OWL *GLAUCIDIUM BRASILIANUM CACTORUM*

STATUS: PROPOSED ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: No CFR: 59 FR 63975, 12-12-94

DESCRIPTION: SMALL (APPROX. 7"), DIURNAL OWL REDDISH BROWN OVERALL WITH CREAM-COLORED BELLY STREAKED WITH REDDISH BROWN. SOME INDIVIDUALS ARE GRAYISH BROWN

ELEVATION RANGE: <4000 FT.

COUNTIES: MARICOPA, YUMA, SANTA CRUZ, GRAHAM, GREENLEE, PIMA, PINAL, GILA, YAVAPAI

HABITAT: MATURE COTTONWOOD/WILLOW, MESQUITE BOSQUES, AND DESERT SCRUB

RANGE LIMIT IN ARIZONA IS FROM NEW RIVER (NORTH) TO GILA BOX (EAST) TO CABEZA PRIETA MOUNTAINS (WEST). ONLY A FEW DOCUMENTED SITES WHERE THIS SPECIES PERSISTS ARE KNOWN. ADDITIONAL SURVEYS ARE NEEDED. CRITICAL HABITAT HAS BEEN PROPOSED FOR THIS SPECIES.

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: "pinal"

Arizona

CANDIDATE TOTAL= 1

NAME: ACUNA CACTUS *ECHINOMASTUS ERECTOCENTRUS ACUNENSIS*

STATUS: CATEGORY-1 CRITICAL HABITAT: No RECOVERY PLAN: No CFR:

DESCRIPTION: <12 INCHES HIGH SPINE CLUSTERS BORNE ON TUBERCLES, EACH WITH A GROOVE ON THE UPPER SURFACE. 2-3 CENTRAL SPINES AND 12 RADIAL SPINES. FLOWERS PINK TO PURPLE

ELEVATION RANGE: 1300-2000 FT.

COUNTIES: PINAL, PIMA

HABITAT: WELL DRAINED KNOLLS AND GRAVEL RIDGES IN SONORAN DESERT SCRUB

IMMATURE PLANTS DISTINCTLY DIFFERENT FROM MATURE PLANTS. THEY ARE DISC-SHAPED OR SPHERICAL AND HAVE NO CENTRAL SPINES UNTIL THEY ARE ABOUT 1.5 INCHES . RADIAL SPINES ARE DIRTY WHITE WITH MAROON TIPS.

LISTED TOTAL= 16

Arizona

NAME: COCHISE PINCUSHION CACTUS *CORYPHANTHA ROBBINSORUM*

STATUS: THREATENED CRITICAL HABITAT: No RECOVERY PLAN: Yes CFR: 51 FR 952, 1-9-1986

DESCRIPTION: A SMALL UNBRANCHED CACTUS WITH NO CENTRAL SPINES AND 11-17 WHITE RADIAL SPINES. THE BELL-SHAPED FLOWERS ARE BORNE ON THE ENDS OF TUBERCULES (Protrusions). FLOWERS: BELL SHAPED, PALE YELLOW-GREEN. FRUITS. ORANGE-RED TO RED

ELEVATION RANGE: >4200 FT.

COUNTIES: COCHISE AND SONORA, MEXICO

HABITAT: SEMIDESERT GRASSLAND WITH SMALL SHRUBS, AGAVE, OTHER CACTI, AND GRAMA GRASS.

GROWS ON GRAY LIMESTONE HILLS.

NAME: NEW MEXICAN RIDGE-NOSED RATTLESNAKE *CROTALUS WILLARDI OBSCURUS*

STATUS: THREATENED CRITICAL HABITAT: Yes RECOVERY PLAN: Yes CFR: 43 FR 34479, 04-04-1978

DESCRIPTION: SMALL 12-24 INCHES, SECRETIVE GRAYISH-BROWN WITH DISTINCT RIDGE ON THE END OF THE SNOUT. THE DORSAL SURFACE HAS OBSCURE, IRREGULARLY SPACED WHITE CROSSBARS EDGED WITH BROWN (NOT A BOLD PATTERN).

ELEVATION RANGE: 5600-9000 FT.

COUNTIES: COCHISE

HABITAT: PRESUMABLY CANYON BOTTOMS IN PINE-OAK & PINE-FIR COMMUNITIES WITH ALDER, MAPLE, OAK, & BOX ELDER

THE SUBSPECIES HAS NOT BEEN DOCUMENTED IN ARIZONA. HOWEVER, IT HAS BEEN OBSERVED NEAR THE ARIZONA BORDER IN THE PELONCILLO MOUNTAINS AND LIKELY OCCURS IN THE ARIZONA PORTION OF THAT RANGE AS WELL. ANOTHER SUBSPECIES, (CROTALUS WILLARDI WILLARDI), IS AN ARIZONA STATE CANDIDATE.

NAME: JAGUARUNDI *FELIS YAGOUAROUNDI TOLTECA*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: No CFR: 41 FR 24064; 06-14-76

DESCRIPTION: SMALL CAT WITH SHORT LEGS; SLENDER, ELONGATE BODY; AND LONG TAIL. HEAD SMALL & FLATTENED WITH SHORT ROUNDED EARS. REDDISH-YELLOW OR BLACKISH TO BROWN-GRAY IN COLOR AND WITHOUT SPOTS.

ELEVATION RANGE: 3500-6000 FT.

COUNTIES: SANTA CRUZ, PIMA, COCHISE

HABITAT: CAN BE FOUND IN A VARIETY OF HABITATS (SEE BELOW)

SEMI-ARID THORNY FORESTS, DECIDOUS FORESTS, HUMID PRE-MONTANE FORESTS, UPLAND DRY SAVANNAHS, SWAMPY GRASSLANDS, RIPARIAN AREAS, AND DENSE BRUSH. UNCONFIRMED REPORTS OF INDIVIDUALS IN THE SOUTHERN PART OF THE STATE CONTINUE TO BE RECEIVED. NO SPECIMENS HAVE BEEN COLLECTED IN ARIZONA.

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: "COCHISE"

NAME: LESSER LONG-NOSED BAT *LEPTONYCTERIS CURASOAE YERBABUENAE*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: No CFR: 53 FR 38456, 09-30-88

DESCRIPTION: ELONGATED MUZZLE, SMALL LEAF NOSE, AND LONG TONGUE. YELLOWISH BROWN OR GRAY ABOVE AND CINNAMON BROWN BELOW. TAIL MINUTE AND APPEARS TO BE LACKING. EASILY DISTURBED.

ELEVATION RANGE: <6000 FT.

COUNTIES: COCHISE, PIMA, SANTA CRUZ, GRAHAM, PINAL, MARICOPA

HABITAT: DESERT SCRUB HABITAT WITH AGAVE AND COLUNMNAR CACTI PRESENT AS FOOD PLANTS

DAY ROOSTS IN CAVES AND ABANDONED TUNNELS. FORAGES AT NIGHT ON NECTAR, POLLEN, AND FRUIT OF PANICULATE AGAVES AND COLUMNAR CACTI. THIS SPECIES IS MIGRATORY AND IS PRESENT IN ARIZONA , USUALLY FROM APRIL TO SEPTMBER AND SOUTH OF THE BORDER THE REMAINDER OF THE YEAR.

NAME: MEXICAN GRAY WOLF *CANIS LUPUS BAILEYI*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: Yes CFR: 32 FR 4001, 03-11-67; 43 FR 1912, 03-09-78

DESCRIPTION: LARGE DOG-LIKE CARNIVORE WITH VARYING COLOR, BUT USUALLY A SHADE OF GRAY. DISTINCT WHITE LIP LINE AROUND MOUTH. WEIGH 60-90 POUNDS.

ELEVATION RANGE: 4,000-12,00iFT.

COUNTIES: COCHISE, PIMA, SANTA CRUZ

HABITAT: CHAPPARAL, WOODLAND, AND FORESTED AREAS. MAY CROSS DESERT AREAS.

HISTORIC RANGE IS CONSIDERED TO BE LARGER THAN THE COUNTIES LISTED ABOVE. UNCONFIRMED REPORTS OF INDIVIDUALS IN THE SOUTHERN PART OF THE STATE CONTINUE TO BE RECEIVED. INDIVIDUALS MAY STILL PERSIST IN MEXICO.

NAME: OCELOT *FELIS PARDALIS*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: Yes CFR: 47 FR 31670; 07-21-82

DESCRIPTION: MEDIUM-SIZED SPOTTED CAT WHOSE TAIL IS ABOUT 1/2 THE LENGTH OF HEAD AND BODY. YELLOWISH WITH BLACK STREAKS AND STRIPES RUNNING FROM FRONT TO BACK. TAIL IS SPOTTED AND FACE IS LESS HEAVILY STREAKED THAN THE BACK AND SIDES.

ELEVATION RANGE: <8000 FT.

COUNTIES: SANTA CRUZ, PIMA, COCHISE

HABITAT: HUMID TROPICAL & SUB-TROPICAL FORESTS, SAVANNAHS, AND SEMI-ARID THORNSCRUB.

MAY PERSIST IN PARTLY-CLEARED FORESTS, SECOND-GROWTH WOODLAND, AND ABANDONED CULTIVATION REVERTED TO BRUSH. UNIVERSAL COMPONENT IS PRESENCE OF DENSE COVER. UNCONFIRMED REPORTS OF INDIVIDUALS IN THE SOUTHERN PART OF THE STATE CONTINUE TO BE RECEIVED.

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: "COCHISE"

Arizona

NAME: **BEAUTIFUL SHINER** *CYPRINELLA FORMOSA*

STATUS: THREATENED CRITICAL HABITAT: Yes RECOVERY PLAN: Yes CFR: 49 FR 34490, 8-31-1984

DESCRIPTION: SMALL (2.5 INCHES) SHINY MINNOW AND VERY SIMILAR TO RED SHINER. MALES COLORFUL DURING BREEDING (YELLOW-ORANGE OR ORANGE ON CAUDAL AND LOWER FINS AND BLUISH BODY.

ELEVATION RANGE: <4500 FT.

COUNTIES: COCHISE

HABITAT: SMALL TO MEDIUM SIZED STREAMS AND PONDS WITH SAND, GRAVEL, AND ROCK BOTTOMS.

VIRTUALLY EXTIRPATED IN THE UNITED STATES, WITH THE EXCEPTION OF A FEW ISOLATED POPULATIONS ON NATIONAL WILDLIFE REFUGES AND IN MEXICO. SAME CRITICAL HABITAT AS YAQUI CHUB AND CATFISH (SEE 49 FR 34490, 08-31-1984).

NAME: **YAQUI CATFISH** *ICTALURUS PRICEI*

STATUS: THREATENED CRITICAL HABITAT: Yes RECOVERY PLAN: Yes CFR: 49 FR 34490, 08-31-1984

DESCRIPTION: SIMILAR TO CHANNEL CATFISH (Ictalurus punctatus) EXCEPT ANAL FIN BASE IS SHORTER AND THE DISTAL MARGIN OF THE ANAL FIN IS BROADLY ROUNDED WITH 23-25 SOFT RAYS. BODY USUALLY PROFUSELY SPECKLED.

ELEVATION RANGE: 4000-5000 FT.

COUNTIES: COCHISE

HABITAT: MODERATE TO LARGE STREAMS WITH SLOW CURRENT OVER SAND AND ROCK BOTTOMS

CRITICAL HABITAT ALL AQUATIC HABITATS IN THE MAIN PORTION OF SAN BERNADINO NATIONAL WILDLIFE REFUGE

NAME: **YAQUI CHUB** *GILA PURPUREA*

STATUS: ENDANGERED CRITICAL HABITAT: Yes RECOVERY PLAN: Yes CFR: 49 FR 34490, 08-31-1984

DESCRIPTION: MEDIUM SIZED MINNOW (<6 INCHES) DARK COLORED, LIGHTER BELOW. DARK TRIANGULAR CAUDAL SPOT

ELEVATION RANGE: 4000-6000 FT.

COUNTIES: COCHISE (AZ), MEXICO

HABITAT: DEEP POOLS OF SMALL STREAMS, POOLS, OR PONDS NEAR UNDERCUT BANKS.

CRITICAL HABITAT INCLUDES ALL AQUATIC HABITATS OF THE MAIN PORTION SAN BERNADINO NATIONAL WILDLIFE REFUGE.

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: "COCHISE"

NAME: YAQUI TOPMINNOW *POECILIOPSIS OCCIDENTALIS SONORIENSIS*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: Yes CFR: 32 FR 4001, 03-11-1967

DESCRIPTION: SMALL (2 INCHES) TOPMINNOW GUPPY-LIKE, LIVE BEARING, LACKING DARK SPOTS. BREEDING MALES JET BLACK WITH YELLOW FINS.

ELEVATION RANGE: <4500 FT.

COUNTIES: COCHISE

HABITAT: SMALL TO MODERATE SIZED STREAMS, SPRINGS, & CIENEGAS GENERALLY IN SHALLOWS

NAME: AMERICAN PEREGRINE FALCON *FALCO PEREGRINUS ANATUM*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: Yes CFR: 35 FR 16047, 10-13-70; 35 FR 8495, 06-02-70

DESCRIPTION: A RECLUSIVE, CROW-SIZED FALCON SLATY BLUE ABOVE WHITISH BELOW WITH FINE DARK BARRING. THE HEAD IS BLACK AND APPEARS TO BE MASKED OR HELMETED. WINGS LONG AND POINTED. LOUD WAILING CALLS ARE GIVEN DURING BREEDING PERIOD.

ELEVATION RANGE: 3500-9000 FT.

COUNTIES: MOHAVE COCONINO NAVAJO APACHE SANTA CRUZ MARICOPA COCHISE YAVAPAI GILA PINAL PIMA GREENLEE GRAHAM

HABITAT: CLIFFS AND STEEP TERRAIN USUALLY NEAR WATER OR WOODLANDS WITH ABUNDANT PREY

THIS IS A WIDE RANGING MIGRATORY BIRD THAT USES A VARIETY OF HABITATS. BREEDING BIRDS ARE YEAR-ROUND RESIDENTS. OTHER BIRDS WINTER AND MIGRATE THROUGH ARIZONA. SPECIES IS ENDANGERED FROM REPRODUCTIVE FAILURE FROM PESTICIDES.

NAME: CALIFORNIA CONDOR *GYMNOPS CALIFORNIANUS*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: Yes CFR: 32 FR 4001, 03-11-67

DESCRIPTION: VERY LARGE VULTURE (55 INCHES HEAD TO TAIL, WING=34, TAIL=16, TARSUS=4.25). HEAD AND UPPER PARTS OF NECK BARE, BILL YELLOW, CERE, HEAD, AND NECK YELLOWISH-RED, PLUMAGE GREY-BLACK.

ELEVATION RANGE: VARIES FT.

COUNTIES: MOHAVE, COCONINO, NAVAJO COCHISE

HABITAT: HIGH DESERT CANYONLANDS, AND PLATEAUS

RECOVERY/REINTRODUCTION PROGRAM CURRENTLY EVALUATING THE FEASIBILITY OF REINTRODUCTION INTO ARIZONA BY 1996. NO LONGER OCCURS IN ARIZONA.

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: "COCHISE"

Arizona

NAME: MEXICAN SPOTTED OWL *STRIX OCCIDENTALIS LUCIDA*

STATUS: THREATENED CRITICAL HABITAT: Yes RECOVERY PLAN: Yes CFR: 56 FR 14678, 04-11-91

DESCRIPTION: MEDIUM SIZED WITH DARK EYES AND NO EAR TUFTS. BROWNISH AND HEAVILY SPOTTED WITH WHITE OR BEIGE.

ELEVATION RANGE: 4100-9000 FT.

COUNTIES: MOHAVE, COCONINO, NAVAJO, APACHE, YAVAPAI, GRAHAM, GREENLEE, COCHISE, SANTA CRUZ, PIMA, PINAL, GILA, MARICOPA

HABITAT: NESTS IN CANYONS AND DENSE FORESTS WITH MULTI-LAYERED FOLIAGE STRUCTURE.

GENERALLY NESTS IN OLDER FORESTS OF MIXED CONIFER OR PONDERSA PINE/GAMBEL OAK TYPE. IN CANYONS. AND USE VARIETY OF HABITATS FOR FORAGING. SITES WITH COOL MICROCLIMATES APPEAR TO BE OF IMPORTANCE OR ARE PREFERED.

NAME: NORTHERN APLOMADO FALCON *FALCO FEMORALIS SEPTENTRIONALIS*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: Yes CFR: 51 FR 6686, 01-25-86

DESCRIPTION: RUFOUS UNDERPARTS, GRAY BACK, LONG BANDED TAIL, AND A DISTINCT BLACK AND WHITE FACIAL PATTERN. SMALLER THAN PEREGRINE LARGER THAN KESTREL. BREEDS BETWEEN MARCH- JUNE

ELEVATION RANGE: 3500-9000 FT.

COUNTIES: COCHISE, SANTA CRUZ

HABITAT: GRASSLAND AND SAVANNAH

SPECIES FORMERLY NESTED IN SOUTHWESTERN US. NOW OCCURS AS AN ACCIDENTAL. GOOD HABITAT HAS LOW GROUND COVER AND MESQUITE OR YUCCA FOR NESTING PLATFORMS. CONTINUED USE OF PESTICIDES IN MEXICO ENDANGERS THIS SPECIES. NO RECENT CONFIRMED REPORTS FOR ARIZONA.

NAME: SOUTHWESTERN WILLOW FLYCATCHER *EMPIDONAX TRAILLII EXTIMUS*

STATUS: ENDANGERED CRITICAL HABITAT: Yes RECOVERY PLAN: No CFR: 60 FR 10694, 02-27-95

DESCRIPTION: SMALL PASSERINE (ABOUT 6") GRAYISH-GREEN BACK AND WINGS, WHITISH THROAT, LIGHT OLIVE-GRAY BREAST AND PALE YELLOWISH BELLY. TWO WINGBARS VISIBLE. EYE-RING FAINT OR ABSENT.

ELEVATION RANGE: <8500 FT.

COUNTIES: YAVAPAI, GILA, MARICOPA, MOHAVE, COCONINO, NAVAJO, APACHE, PINAL, LA PAZ, GREENLEE, GRAHAM, YUMA, PIMA, COCHISE, SANTA CRUZ

HABITAT: COTTONWOOD/WILLOW & TAMARISK VEGETATION COMMUNITIES ALONG RIVERS & STREAMS

MIGRATORY RIPARIAN OBLIGATE SPECIES THAT OCCUPIES BREEDING HABITAT FROM LATE APRIL TO SEPTEMBER. DISTRIBUTION WITHIN ITS RANGE IS RESTRICTED TO RIPARIAN CORRIDORS. DIFFICULT TO DISTINGUISH FROM OTHER MEMBERS OF THE EMPIDONAX COMPLEX BY SIGHT ALONE. TRAINING SEMINAR REQUIRED FOR THOSE CONDUCTING FLYCATCHER SURVEYS.

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: "COCHISE"

NAME: **WHOOPING CRANE** *GRUS AMERICANA*

STATUS: ENDANGERED CRITICAL HABITAT: Yes RECOVERY PLAN: Yes CFR: 32 FR 4001, 03-11-1967; 43 FR 20938, 05-15-78

DESCRIPTION: TALLEST AMERICAN BIRD (UP TO 5 FEET) SNOWY WHITE, LONG NECK AND LEGS, BLACK WING TIPS, RED CROWN, AND BLACK WEDGE SHAPED PATCH OF FETHERS BEHIND ITS EYE.

ELEVATION RANGE: 4500 FT.

COUNTIES: COCHISE

HABITAT: MARSHES, PRAIRIES, RIVER BOTTOMS

BIRDS IN THE ROCKY MOUNTAIN POPULATION ARE OCCASIONAL VISITORS IN ARIZONA DURING MIGRATION. USUALLY NEAR WILCOX PLAYA.

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: *COCHISE*

PROPOSED TOTAL= 4

Arizona

NAME: CANELO HILLS LADIES' TRESSES *SPIRANTHES DELITESCENS*

STATUS: PROPOSED ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: No CFR: 60 FR 16836, 4-3-1995

DESCRIPTION: SLENDER ERECT MEMBER OF THE ORCHID FAMILY (ORCHIDACEAE). FLOWER: STALK 50 CM TALL, MAY CONTAIN 40 WHITE FLOWERS SPIRALLY ARRANGED ON THE FLOWERING STALK.

ELEVATION RANGE: about 5000 FT.

COUNTIES: COCHISE, SANTA CRUZ

HABITAT: FINELY GRAINED, HIGHLY ORGANIC, SATURATED SOILS OF CIENEGAS

NAME: HUACHUCA WATER UMBEL *LILAEOPSIS SCHAFFNERIANA ssp RECURVA*

STATUS: PROPOSED ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: No CFR: 60 FR 16836, 4-3-1995

DESCRIPTION: HERBACEOUS, SEMI-AQUATIC PERENNIAL IN THE PARSLEY FAMILY (UMBELLIFERAE) WITH SLENDER ERECT, HOLLOW, LEAVES THAT GROW FROM THE NODES OF CREEPING RHIZOMES. FLOWER: 3 TO 10 FLOWERED UMBELS ARISE FROM ROOT NODES.

ELEVATION RANGE: 3500-6500 FT.

COUNTIES: PIMA, SANTA CRUZ, COCHISE

HABITAT: CIENEGAS, PERENNIAL LOW GRADIENT STREAMS, WETLANDS

NAME: JAGUAR, UNITED STATES POPULATION *PANTHERA ONCA*

STATUS: PROPOSED ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: No CFR: 59 FR 35674; 7-13-94

DESCRIPTION: MUSCULAR CAT WITH RELATIVELY SHORT, MASSIVE LIMBS AND A DEEP-CHESTED BODY. CINNAMON-BUFF IN COLOR WITH BLACK SPOTS.

ELEVATION RANGE: <8000 FT.

COUNTIES: COCHISE, PIMA, SANTA CRUZ

HABITAT: IN ARIZONA, RANGED WIDELY THROUGHOUT A VARIETY OF HABITATS FROM SONORAN DESERT TO CONIFER FORESTS

MOST RECORDS ARE FROM THE MADREAN EVERGREEN-WOODLAND, SHRUB-INVADED SEMI-DESERT GRASSLAND, AND ALONG RIVERS. HISTORIC RANGE IS CONSIDERED TO HAVE EXTENDED BEYOND THE COUNTIES LISTED ABOVE. REPORTS OF INDIVIDUALS IN THE SOUTHERN PART OF THE STATE CONTINUE TO BE RECEIVED. THIS SPECIES IS LISTED AS ENDANGERED FROM THE U.S.-MEXICO BORDER SOUTH. LAST CONFIRMED INDIVIDUAL WAS KILLED IN ARIZONA IN 1991. SINCE THEN UNCONFIRMED SIGHTINGS AND TRACKS CONTINUE TO BE REPORTED.

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: *COCHISE*

CANDIDATE TOTAL= 5

Arizona

NAME: BLUMER'S DOCK *RUMEX ORTHONEURUS*

STATUS: CATEGORY-1 CRITICAL HABITAT: No RECOVERY PLAN: No CFR:

DESCRIPTION: LARGE LONG-LIVED PERENNIAL PLANT IN THE BUCKWHEAT FAMILY THAT CAN REACH 1.2-2.0 METERS. LARGE BROAD, OVAL SEMI-SUCCULENT LEAVES ARE BRIGHT GREEN. CONSPICOUS SECONDARY VEINS AT RIGHT ANGLES TO THE MIDVEIN

ELEVATION RANGE: 6500-9000 FT.

COUNTIES: GILA, COCHISE

HABITAT: MID TO HIGH ELEVATION SPRINGS, STREAMS, & WETLANDS WITH MOIST ORGANIC SOILS OR SHADED CANYONS

NAME: LEMMON FLEABANE *ERIGERON LEMMONII*

STATUS: CATEGORY-1 CRITICAL HABITAT: No RECOVERY PLAN: No CFR:

DESCRIPTION: A PROSTRATE PERENNIAL IN THE SUNFLOWER FAMILY. STEMS AND LEAVES ARE DENSELY HAIRY. FLOWERS LOOK LIKE SMALL DELICATE DAISIES, WITH WHITE TO LIGHT PURPLE OUTER PETALS AND YELLOW INNER PETALS.

ELEVATION RANGE: 1500-6000 FT.

COUNTIES: COCHISE

HABITAT: GROWS IN DENSE CLUMPS IN CREVICES, LEDGES, AND BOULDERS IN CANYON BOTTOMS IN PINE-OAK WOODLAND

NAME: HUACHUCA SPRINGSNAIL *PYRGULOPSIS THOMPSONI*

STATUS: CATEGORY-1 CRITICAL HABITAT: No RECOVERY PLAN: No CFR:

DESCRIPTION: VERY SMALL (1.7-3.2mm) CONICAL SHELL. IDENTIFICATION MUST BE VERIFIED BY CHARARCTERISTICS OF REPRODUCTIVE ORGANS.

ELEVATION RANGE: 4500-6000 FT.

COUNTIES: COCHISE, SANTA CRUZ

HABITAT: AQUATIC AREAS, SMALL SPRINGS WITH VEGETATION SLOW TO MODERATE FLOW.

INDIVIDUALS FOUND ON FIRM SUBSTANCES (ROOTS, WOOD, AND ROCKS)

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: "COCHISE"

NAME: **CHIRICAHUA LEOPARD FROG** *RANA CHIRICAHUENSIS*

STATUS: CATEGORY-1 CRITICAL HABITAT: No RECOVERY PLAN: No CFR: 59 FR 58996

DESCRIPTION: CREAM COLORED TUBERCULES (spots) ON A DARK BACKGROUND ON THE REAR OF THE THIGH. DORSOLATERAL FOLDS THAT ARE INTERRUPTED AND DEFLECTED MEDIALLY, AND A CALL GIVEN OUT OF WATER DISTINGUISH THIS SPOTTED FROG FROM OTHER LEOPRD

ELEVATION RANGE: 3000-8300 FT.

COUNTIES: SANTA CRUZ, APACHE, GILA, PIMA, COCHISE, GREENLEE, GRAHAM, YAVAPAI, COCONINO, NAVAJO

HABITAT: STREAMS, RIVERS, BACKWATERS, PONDS, AND STOCK TANKS THAT ARE FREE FROM INTRODUCED FISH AND BULLFROGS

REQUIRE PERMANENT OR NEARLY PERMANENT WATER SOURCES. POPULATIONS NORTH OF THE GILA RIVER ARE THOUGHT TO BE CLOSELY-RELATED, BUT DISTINCT, UNDESCRIBED SPECIES.

NAME: **RAMSEY CANYON LEOPARD FROG** *RANA SUBAQUAVOCALIS*

STATUS: CATEGORY-1 CRITICAL HABITAT: No RECOVERY PLAN: No CFR: 59 FR 58996

DESCRIPTION: LARGE FROG WITH CREAM-COLORED TUBERCULES (spots) ON A DARK BACKGROUND ON THE REAR OF THE THIGH. TYPICALLY SPOTTED AND GREEN. CALL GIVEN UNDERWATER

ELEVATION RANGE: 5000-5700 FT.

COUNTIES: COCHISE

HABITAT: ARTIFICIAL PONDS IN TINKER, BROWN, AND RAMSEY CANYONS ON THE EAST SLOPE OF THE HUACHUCA MOUNTAINS.

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: "PIMA"

Arizony

LISTED TOTAL= 15

NAME: KEARNEY'S BLUE STAR *AMSONIA KEARNEYANA*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: Yes CFR: 54 FR 2131, 01-19-1989

DESCRIPTION: A HERBACEOUS PERENNIAL IN THE DOGBANE FAMILY (APOCYNACEAE). THICKENED WOODY ROOT AND MANY PUBESCENT (HAIRY) STEMS THAT RARELY BRANCH. FLOWERS:WHITE TERMINAL INFLORESCENCE IN APRIL & MAY.

ELEVATION RANGE: 3600-3800 FT.

COUNTIES: PIMA

HABITAT: WEST-FACING DRAINAGES IN THE BABOQUIVARI MOUNTAINS.

PLANTS GROW IN STABLE, PARTIALLY SHADED, COARSE ALLUVIUM ALONG A DRY WASH IN THE BABOQUIVARI MOUNTAINS. RANGE IS EXTREMELY LIMITED. PROTECTED BY ARIZONA NATIVE PLANT LAW.

NAME: NICHOL'S TURK'S HEAD CACTUS *ECHINOCACTUS HORIZONTHALONIUS VAR NICHOLII*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: No CFR: 44 FR 61927, 10-26-1979

DESCRIPTION: BLUE-GREEN TO YELLOWISH-GREEN, COLUMNAR, 18 INCHES TALL, 8 INCHES IN DIAMETER. SPINE CLUSTERS HAVE 5 RADIAL & 3 CENTRAL SPINES; ONE DOWNWARD SHORT; 2 SPINES UPWARD AND RED OR BASALLY GRAY. FLOWER:PINK FRUIT:WOOLLY WHITE

ELEVATION RANGE: 2400-4100 FT.

COUNTIES: PINAL, PIMA, YUMA

HABITAT: SONORAN DESERTSCRUB

FOUND IN UNSHADED MICROSITES IN SONORAN DESERTSCRUB ON DISSECTED ALLUVIAL FANS AT THE FOOT OF LIMESTONE MOUNTAINS AND ON INCLINED TERRACES AND SADDLES ON LIMESTONE MOUNTAINSIDES. NEW POPULATION ON YUMA PROVING GROUNDS.

NAME: PIMA PINEAPPLE CACTUS *CORYPHANTHA SCHEERI ROBUSTISPINA*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: No CFR: 57 FR 14374, 04-20-1992

DESCRIPTION: HEMISHPERICAL STEMS 4-7 INCHES TALL 3-4 INCHES DIAMETER. CENTRAL SPINE 1 INCH LONG STRAW COLORED HOOKED SURROUNDED BY 6-15 RADIAL SPINES. FLOWER: YELLOW SALMON OR RARELY WHITE NARROW FLORAL TUBE.

ELEVATION RANGE: 2300-5000 FT.

COUNTIES: PIMA, SANTA CRUZ

HABITAT: SONORAN DESERTSCRUB OR SEMI-DESERT GRASSLAND COMMUNITIES

OCCURS IN ALLUVIAL VALLEYS OR ON HILLSIDES IN ROCKY TO SANDY OR SILTY SOILS. THIS SPECIE CAN BE CONFUSED WITH JUVENILLE BARREL CACTUS (FEROCACTUS). HOWEVER, THE SPINES OF THE LATER ARE FLATTENED, IN CONTRAST WITH THE ROUND CROSS-SECTION OF THE CORYPHANTHA SPINES. ALSO THE AREOLES (SPINE CLUSTERS) OF CORYPHANTHA ARE ON TUBERCULES (BUMPS), WHILE THE AREOLES OF FEROCACTUS ARE ON RIDGES (RIBS).

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: "PIMA"

NAME: **JAGUARUNDI** *FELIS YAGOUAROUNDI TOLTECA*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: No CFR: 41 FR 24064; 06-14-76

DESCRIPTION: SMALL CAT WITH SHORT LEGS; SLENDER,ELONGATE BODY; AND LONG TAIL. HEAD SMALL & FLATTENED WITH SHORT ROUNDED EARS. REDDISH-YELLOW OR BLACKISH TO BROWN-GRAY IN COLOR AND WITHOUT SPOTS.

ELEVATION RANGE: 3500-6000 FT.

COUNTIES: SANTA CRUZ, PIMA, COCHISE

HABITAT: CAN BE FOUND IN A VARIETY OF HABITATS (SEE BELOW)

SEMI-ARID THORNY FORESTS, DECIDOUS FORESTS, HUMID PRE-MONTANE FORESTS, UPLAND DRY SAVANNAHS, SWAMPY GRASSLANDS, RIPARIAN AREAS, AND DENSE BRUSH. UNCONFIRMED REPORTS OF INDIVIDUALS IN THE SOUTHERN PART OF THE STATE CONTINUE TO BE RECEIVED. NO SPECIMENS HAVE BEEN COLLECTED IN ARIZONA.

NAME: **LESSER LONG-NOSED BAT** *LEPTONYCTERIS CURASOAE YERBABUENAE*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: No CFR: 53 FR 38456, 09-30-88

DESCRIPTION: ELONGATED MUZZLE, SMALL LEAF NOSE, AND LONG TONGUE. YELLOWISH BROWN OR GRAY ABOVE AND CINNAMON BROWN BELOW. TAIL MINUTE AND APPEARS TO BE LACKING. EASILY DISTURBED.

ELEVATION RANGE: <6000 FT.

COUNTIES: COCHISE, PIMA, SANTA CRUZ, GRAHAM, PINAL, MARICOPA

HABITAT: DESERT SCRUB HABITAT WITH AGAVE AND COLUNMNAR CACTI PRESENT AS FOOD PLANTS

DAY ROOSTS IN CAVES AND ABANDONED TUNNELS. FORAGES AT NIGHT ON NECTAR, POLLEN, AND FRUIT OF PANICULATE AGAVES AND COLUMNAR CACTI. THIS SPECIES IS MIGRATORY AND IS PRESENT IN ARIZONA , USUALLY FROM APRIL TO SEPTMBER AND SOUTH OF THE BORDER THE REMAINDER OF THE YEAR.

NAME: **MEXICAN GRAY WOLF** *CANIS LUPUS BAILEYI*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: Yes CFR: 32 FR 4001, 03-11-67; 43 FR 1912, 03-09-78

DESCRIPTION: LARGE DOG-LIKE CARNIVORE WITH VARYING COLOR, BUT USUALLY A SHADE OF GRAY. DISTINCT WHITE LIP LINE AROUND MOUTH. WEIGH 60-90 POUNDS.

ELEVATION RANGE: 4,000-12,00 FT.

COUNTIES: COCHISE, PIMA, SANTA CRUZ

HABITAT: CHAPPARAL, WOODLAND, AND FORESTED AREAS. MAY CROSS DESERT AREAS.

HISTORIC RANGE IS CONSIDERED TO BE LARGER THAN THE COUNTIES LISTED ABOVE. UNCONFIRMED REPORTS OF INDIVIDUALS IN THE SOUTHERN PART OF THE STATE CONTINUE TO BE RECEIVED. INDIVIDUALS MAY STILL PERSIST IN MEXICO.

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: *PIMA*

Arizona

NAME: **OCELOT** *FELIS PARDALIS*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: Yes CFR: 47 FR 31670; 07-21-82

DESCRIPTION: MEDIUM-SIZED SPOTTED CAT WHOSE TAIL IS ABOUT 1/2 THE LENGTH OF HEAD AND BODY. YELLOWISH WITH BLACK STREAKS AND STRIPES RUNNING FROM FRONT TO BACK. TAIL IS SPOTTED AND FACE IS LESS HEAVILY STREAKED THAN THE BACK AND SIDES.

ELEVATION RANGE: <8000 FT.

COUNTIES: SANTA CRUZ, PIMA, COCHISE

HABITAT: HUMID TROPICAL & SUB-TROPICAL FORESTS, SAVANNAHS, AND SEMI-ARID THORNSCRUB.

MAY PERSIST IN PARTLY-CLEARED FORESTS, SECOND-GROWTH WOODLAND, AND ABANDONED CULTIVATION REVERTED TO BRUSH. UNIVERSAL COMPONENT IS PRESENCE OF DENSE COVER. UNCONFIRMED REPORTS OF INDIVIDUALS IN THE SOUTHERN PART OF THE STATE CONTINUE TO BE RECEIVED.

NAME: **SONORAN PRONGHORN** *ANTILOCAPRA AMERICANA SONORIENSIS*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: Yes CFR: 32 FR 4001, 03-11-67

DESCRIPTION: BUFF ON BACK AND WHITE BELOW, HOOFED WITH SLIGHTLY CURVED BLACK HORNS HAVING A SINGLE PRONG. SMALLEST AND PALEST OF THE PRONGHORN SUBSPECIES.

ELEVATION RANGE: 2000-4000 FT.

COUNTIES: PIMA, YUMA, MARICOPA

HABITAT: BROAD, INTERMOUNTAIN ALLUVIAL VALLEYS WITH CREOSOTE-BURSAGE & PALO VERDE-MIXED CACTI ASSOCIATIONS

TYPICALLY, BAJADAS ARE USED AS FAWNING AREAS AND SANDY DUNE AREAS PROVIDE FOOD SEASONALLY HISTORIC RANGE WAS PROBABLY LARGER THAN EXISTS TODAY. THIS SUBSPECIES ALSO OCCURS IN MEXICO.

NAME: **DESERT PUPFISH** *CYPRINODON MACULARIUS*

STATUS: ENDANGERED CRITICAL HABITAT: Yes RECOVERY PLAN: Yes CFR: 51 FR 10842, 03-31-1986

DESCRIPTION: SMALL (2 INCHES) SMOOTHLY ROUNDED BODY SHAPE WITH NARROW VERTICAL BARS ON THE SIDES. BREEDING MALES BLUE ON HEAD AND SIDES WITH YELLOW ON TAIL. FEMALES & JUVENILES TAN TO OLIVE COLORED BACK AND SILVERY SIDES.

ELEVATION RANGE: <5000 FT.

COUNTIES: LA PAZ, PIMA, GRAHAM, MARICOPA, PINAL, YAVAPAI, SANTA CRUZ

HABITAT: SHALLOW SPRINGS, SMALL STREAMS, AND MARSHES. TOLERATES SALINE & WARM WATER

CRITICAL HABITAT INCLUDES QUITOBAQUITO SPRING, PIMA COUNTY, PORTIONS OF SAN FELIPE CREEK, CARRIZO WASH, AND FISH CREEK WASH, IMPERIAL COUNTY, CALIFORNIA. TWO SUBSPECIES ARE RECOGNIZED: DESERT PUPFISH (C. m. macularis) AND QUITOBAQUITO PUPFISH (C. m. eremus).

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: *PIMA*

NAME: **GILA TOPMINNOW** *POECILIOPSIS OCCIDENTALIS OCCIDENTALIS*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: Yes CFR: 32 FR 4001, 03-11-1967

DESCRIPTION: SMALL (2 INCHES), GUPPY-LIKE, LIVE BEARING, LACKS DARK SPOTS ON ITS FINS. BREEDING MALES ARE JET BLACK WITH YELLOW FINS.

ELEVATION RANGE: <4500 FT.

COUNTIES: GILA, PINAL, GRAHAM, YAVAPAI, SANTA CRUZ, PIMA, MARICOPA, LA PAZ

HABITAT: SMALL STREAMS, SPRINGS, AND CIENEGAS VEGETATED SHALLOWS

NAME: **AMERICAN PEREGRINE FALCON** *FALCO PEREGRINUS ANATUM*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: Yes CFR: 35 FR 16047, 10-13-70; 35 FR 8495, 06-02-70

DESCRIPTION: A RECLUSIVE, CROW-SIZED FALCON SLATY BLUE ABOVE WHITISH BELOW WITH FINE DARK BARRING. THE HEAD IS BLACK AND APPEARS TO BE MASKED OR HELMETED. WINGS LONG AND POINTED. LOUD WAILING CALLS ARE GIVEN DURING BREEDING PERIOD.

ELEVATION RANGE: 3500-9000 FT.

COUNTIES: MOHAVE COCONINO NAVAJO APACHE SANTA CRUZ MARICOPA COCHISE YAVAPAI GILA PINAL PIMA GREENLEE GRAHAM

HABITAT: CLIFFS AND STEEP TERRAIN USUALLY NEAR WATER OR WOODLANDS WITH ABUNDANT PREY

THIS IS A WIDE RANGING MIGRATORY BIRD THAT USES A VARIETY OF HABITATS. BREEDING BIRDS ARE YEAR-ROUND RESIDENTS. OTHER BIRDS WINTER AND MIGRATE THROUGH ARIZONA. SPECIES IS ENDANGERED FROM REPRODUCTIVE FAILURE FROM PESTICIDES.

NAME: **BALD EAGLE** *HALIAEETUS LEUCOCEPHALUS*

STATUS: THREATENED CRITICAL HABITAT: No RECOVERY PLAN: Yes CFR: 60 FR 35999, 07-12-95

DESCRIPTION: LARGE, ADULTS HAVE WHITE HEAD AND TAIL. HEIGHT 28 - 38"; WINGSPAN 66 - 96". 1- YRS DARK WITH VARYING DEGREES OF MOTTLED BROWN PLUMAGE. FEET BARE OF FEATHERS.

ELEVATION RANGE: VARIES FT.

COUNTIES: YUMA, LA PAZ MOHAVE, YAVAPAI, MARICOPA, PINAL, COCONINO, NAVAJO, APACHE, SANTA CRUZ, PIMA, GILA, GRAHAM

HABITAT: LARGE TREES OR CLIFFS NEAR WATER (RESERVOIRS, RIVERS AND STREAMS) WITH ABUNDANT PREY

SOME BIRDS ARE NESTING RESIDENTS WHILE A LARGER NUMBER WINTERS ALONG RIVERS AND RESERVOIRS. AN ESTIMATED 200 TO 300 BIRDS WINTER IN ARIZONA. ONCE ENDANGERED (32 FR 4001, 03-11-1967; 43 FR 6233, 02-14-78) BECAUSE OF REPRODUCTIVE FAILURES FROM PESTICIDE POISONING AND LOSS OF HABITAT, THIS SPECIES WAS DOWN LISTED TO THREATENED ON AUGUST 11, 1995. ILLEGAL SHOOTING, DISTURBANCE, LOSS OF HABITAT CONTINUES TO BE A PROBLEM.

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: "PIMA"

Arizona

NAME: **MASKED BOBWHITE** *COLINUS VIRGINIANUS RIDGEWAYI*

STATUS: ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: Yes CFR: 35 FR 4001, 03-11-1967; 35 FR 8495, 06-02-70

DESCRIPTION: MALES BRICK-RED BREAST AND BLACK HEAD AND THROAT. FEMALES ARE GENERALLY NONDESCRIPT BUT RESEMBLE OTHER RACES SUCH AS THE TEXAS BOBWHITE.

ELEVATION RANGE: 1000-4000 FT.

COUNTIES: PIMA

HABITAT: DESERT GRASSLANDS WITH DIVERSITY OF DENSE NATIVE GRASSES, FORBS AND BRUSH

SPECIES IS CLOSELY ASSOCIATED WITH ACACIA ANGUSTISSIMA. FORMERLY OCCURRED IN ALTAR AND SANTA CRUZ VALLEYS, AS WELL AS SONORA, MEXICO. PRESENTLY ONLY KNOWN FROM REINTRODUCED POPULATION ON BUENOS AIRES.

NAME: **MEXICAN SPOTTED OWL** *STRIX OCCIDENTALIS LUCIDA*

STATUS: THREATENED CRITICAL HABITAT: Yes RECOVERY PLAN: Yes CFR: 56 FR 14678, 04-11-91

DESCRIPTION: MEDIUM SIZED WITH DARK EYES AND NO EAR TUFTS. BROWNISH AND HEAVILY SPOTTED WITH WHITE OR BEIGE.

ELEVATION RANGE: 4100-9000 FT.

COUNTIES: MOHAVE, COCONINO, NAVAJO, APACHE, YAVAPAI, GRAHAM, GREENLEE, COCHISE, SANTA CRUZ, PIMA, PINAL, GILA, MARICOPA

HABITAT: NESTS IN CANYONS AND DENSE FORESTS WITH MULTI-LAYERED FOLIAGE STRUCTURE

GENERALLY NESTS IN OLDER FORESTS OF MIXED CONIFER OR PONDERSA PINE/GAMBEL OAK TYPE, IN CANYONS, AND USE VARIETY OF HABITATS FOR FORAGING. SITES WITH COOL MICROCLIMATES APPEAR TO BE OF IMPORTANCE OR ARE PREFERED.

NAME: **SOUTHWESTERN WILLOW FLYCATCHER** *EMPIDONAX TRAILLII EXTIMUS*

STATUS: ENDANGERED CRITICAL HABITAT: Yes RECOVERY PLAN: No CFR: 60 FR 10694, 02-27-95

DESCRIPTION: SMALL PASSERINE (ABOUT 6") GRAYISH-GREEN BACK AND WINGS, WHITISH THROAT, LIGHT OLIVE-GRAY BREAST AND PALE YELLOWISH BELLY. TWO WINGBARS VISIBLE. EYE-RING FAINT OR ABSENT.

ELEVATION RANGE: <8500 FT.

COUNTIES: YAVAPAI, GILA, MARICOPA, MOHAVE, COCONINO, NAVAJO, APACHE, PINAL, LA PAZ, GREENLEE, GRAHAM, YUMA, PIMA, COCHISE, SANTA CRUZ

HABITAT: COTTONWOOD/WILLOW & TAMARISK VEGETATION COMMUNITIES ALONG RIVERS & STREAMS

MIGRATORY RIPARIAN OBLIGATE SPECIES THAT OCCUPIES BREEDING HABITAT FROM LATE APRIL TO SEPTEMBER. DISTRIBUTION WITHIN ITS RANGE IS RESTRICTED TO RIPARIAN CORRIDORS. DIFFICULT TO DISTINGUISH FROM OTHER MEMBERS OF THE EMPIDONAX COMPLEX BY SIGHT ALONE. TRAINING SEMINAR REQUIRED FOR THOSE CONDUCTING FLYCATCHER SURVEYS.

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: *PIMA*

PROPOSED TOTAL= 4

NAME: **HUACHUCA WATER UMBEL** *LILAEOPSIS SCHAFFNERIANA ssp RECURVA*

STATUS: PROPOSED ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: No CFR: 60 FR 16836, 4-3-1995

DESCRIPTION: HERBACEOUS, SEMI-AQUATIC PERENNIAL IN THE PARSLEY FAMILY (UMBELLIFERAE) WITH SLENDER ERECT, HOLLOW, LEAVES THAT GROW FROM THE NODES OF CREEPING RHIZOMES. FLOWER: 3 TO 10 FLOWERED UMBELS ARISE FROM ROOT NODES.

ELEVATION RANGE: 3500-6500 FT.

COUNTIES: PIMA, SANTA CRUZ, COCHISE

HABITAT: CIENEGAS, PERENNIAL LOW GRADIENT STREAMS, WETLANDS

NAME: **SAN XAVIER TALUSSNAIL** *SONORELLA EREMITA*

STATUS: PROPOSED ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: No CFR: 56 FR 13691, 03-23-1994

DESCRIPTION: LESS THAN ONE INCH (AVE 19 MM), LIGHT BROWN, PILL SHAPED, DARK STRIPE ENCIRCLES OUTER PERIMETER

ELEVATION RANGE: 3850 - 3920 FT.

COUNTIES: PIMA

HABITAT: LIMESTONE TALUS ON NORTHSIDE OF A SINGLE HILL.

NAME: **JAGUAR, UNITED STATES POPULATION** *PANTHERA ONCA*

STATUS: PROPOSED ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: No CFR: 59 FR 35674; 7-13-94

DESCRIPTION: MUSCULAR CAT WITH RELATIVELY SHORT, MASSIVE LIMBS AND A DEEP-CHESTED BODY. CINNAMON-BUFF IN COLOR WITH BLACK SPOTS.

ELEVATION RANGE: <8000 FT.

COUNTIES: COCHISE, PIMA, SANTA CRUZ

HABITAT: IN ARIZONA, RANGED WIDELY THROUGHOUT A VARIETY OF HABITATS FROM SONORAN DESERT TO CONIFER FORESTS

MOST RECORDS ARE FROM THE MADREAN EVERGREEN-WOODLAND, SHRUB-INVADED SEMI-DESERT GRASSLAND, AND ALONG RIVERS. HISTORIC RANGE IS CONSIDERED TO HAVE EXTENDED BEYOND THE COUNTIES LISTED ABOVE. REPORTS OF INDIVIDUALS IN THE SOUTHERN PART OF THE STATE CONTINUE TO BE RECEIVED. THIS SPECIES IS LISTED AS ENDANGERED FROM THE U.S.-MEXICO BORDER SOUTH. LAST CONFIRMED INDIVIDUAL WAS KILLED IN ARIZONA IN 1991, SINCE THEN UNCONFIRMED SIGHTINGS AND TRACKS CONTINUE TO BE REPORTED.

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: "PIMA"

Arizona

NAME: CACTUS FERRUGINOUS PYGMY-OWL *GLAUCIDIUM BRASILIANUM CACTORUM*

STATUS: PROPOSED ENDANGERED CRITICAL HABITAT: No RECOVERY PLAN: No CFR: 59 FR 63975, 12-12-94

DESCRIPTION: SMALL (APPROX. 7"), DIURNAL OWL REDDISH BROWN OVERALL WITH CREAM-COLORED BELLY STREAKED WITH REDDISH BROWN. SOME INDIVIDUALS ARE GRAYISH BROWN

ELEVATION RANGE: <4000 FT.

COUNTIES: MARICOPA, YUMA, SANTA CRUZ, GRAHAM, GREENLEE, PIMA, PINAL, GILA, YAVAPAI

HABITAT: MATURE COTTONWOOD/WILLOW, MESQUITE BOSQUES, AND DESERT SCRUB

RANGE LIMIT IN ARIZONA IS FROM NEW RIVER (NORTH) TO GILA BOX (EAST) TO CABEZA PRIETA MOUNTAINS (WEST). ONLY A FEW DOCUMENTED SITES WHERE THIS SPECIES PERSISTS ARE KNOWN. ADDITIONAL SURVEYS ARE NEEDED. CRITICAL HABITAT HAS BEEN PROPOSED FOR THIS SPECIES.

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: *PIMA*

CANDIDATE TOTAL= 4

NAME. ACUNA CACTUS *ECHINOMASTUS ERECTOCENTRUS ACUNENSIS*

STATUS: CATEGORY-1 CRITICAL HABITAT: No RECOVERY PLAN: No CFR:

DESCRIPTION: <12 INCHES HIGH SPINE CLUSTERS BORNE ON TUBERCLES, EACH WITH A GROOVE ON THE UPPER SURFACE. 2-3 CENTRAL SPINES AND 12 RADIAL SPINES. FLOWERS PINK TO PURPLE

ELEVATION RANGE: 1300-2000 FT.

COUNTIES: PINAL, PIMA

HABITAT: WELL DRAINED KNOLLS AND GRAVEL RIDGES IN SONORAN DESERT SCRUB

IMMATURE PLANTS DISTINCTLY DIFFERENT FROM MATURE PLANTS. THEY ARE DISC-SHAPED OR SPHERICAL AND HAVE NO CENTRAL SPINES UNTIL THEY ARE ABOUT 1.5 INCHES . RADIAL SPINES ARE DIRTY WHITE WITH MAROON TIPS.

NAME: GENTRY INDIGO BUSH *DALEA TENTACULOIDES*

STATUS: CATEGORY-1 CRITICAL HABITAT: No RECOVERY PLAN: No CFR:

DESCRIPTION: SHRUBBY PERENNIAL IN THE LEGUME FAMILY WITH NUMEROUS STEMS IN OLDER PLANTS, UP TO 6-7 FEET TALL USUALLY LESS. FLOWER: SMALL ROSE-PURPLE APPEAR IN APRIL-JUNE OR SEPT-OCT.

ELEVATION RANGE: 4500 FT.

COUNTIES: SANTA CRUZ, PIMA

HABITAT: FLOODPLAIN TERRACES IN DRY CANYON RIPARIAN AREAS IN PARTIAL SHADE

NAME: GOODDING ONION *ALLIUM GOODDINGII*

STATUS: CATEGORY-1 CRITICAL HABITAT: No RECOVERY PLAN: No CFR:

DESCRIPTION: PERENNIAL ONION WITH WIDER LEAVES THAN OTHER ARIZONA ONIONS. FLOWERS RED-PURPLE WITH SIX PETALS ON A SCAPE TALLER THAN THE LEAVES

ELEVATION RANGE: 7000-9400 FT.

COUNTIES: GREENLEE, APACHE, PIMA

HABITAT: MATURE FORESTS USUALLY ALONG NORTH-TRENDING DRAINAGE BOTTOMS IN MIXED-CONIFER SPRUCE-FIR ZONES

LISTED, PROPOSED, AND CANDIDATE CATEGORY-1 SPECIES FOR THE FOLLOWING COUNTY: *PIMA*

Arizona

NAME: **CHIRICAHUA LEOPARD FROG** *RANA CHIRICAHUENSIS*

STATUS: CATEGORY-1 CRITICAL HABITAT: No RECOVERY PLAN: No CFR: 59 FR 58996

DESCRIPTION: CREAM COLORED TUBERCULES (spots) ON A DARK BACKGROUND ON THE REAR OF THE THIGH, DORSOLATERAL FOLDS THAT ARE INTERRUPTED AND DEFLECTED MEDIALLY, AND A CALL GIVEN OUT OF WATER DISTINGUISH THIS SPOTTED FROG FROM OTHER LEOPRD

ELEVATION RANGE: 3000-8300 FT.

COUNTIES: SANTA CRUZ, APACHE, GILA, PIMA, COCHISE, GREENLEE, GRAHAM, YAVAPAI, COCONINO, NAVAJO

HABITAT: STREAMS, RIVERS, BACKWATERS, PONDS, AND STOCK TANKS THAT ARE FREE FROM INTRODUCED FISH AND BULLFROGS

REQUIRE PERMANENT OR NEARLY PERMANENT WATER SOURCES. POPULATIONS NORTH OF THE GILA RIVER ARE THOUGHT TO BE CLOSELY-RELATED, BUT DISTINCT, UNDESCRIBED SPECIES.

RARE, THREATENED, AND ENDANGERED SPECIES IN THE REGION OF ABANDONMENTS AND/OR CONSTRUCTION SITES IN ARKANSAS

Common Name	Scientific Name	Status
Flat floater	*Anodonta suborbiculata*	S(SS)
Lake sturgeon	*Acipeser falvescens*	S(SS);F(C2)
Lake chubsucker	*Erimyzon sucetta*	S(SS)
Goldstripe darter	*Etheostoma parvipinne*	S(SS)
Swamp darter	*Etheostoma fasiforme*	S(SS)
Bluehead shiner	*Notropis hubbsi*	S(SS)
Blackspot shiner	*Notropis atrocaudalis*	S(SS)
Red River shiner	*Notropis bairdi*	S(SS)
Taillight shiner	*Notropis maculatus*	S(SS)
Pepperedshiner	*Notropis perpallidus*	S(SS)
Darter	*Percina sp.*	S(SS)
Crystal darter	*Crystallaria asprella*	S(SS);F(C3)
Bird-voiced treefrog	*Hyla avivoca*	S(SS)
Razorback musk turtle	*Sternotherus carinatus*	S(SS)
Graham's crayfish snake	*Regina grahamii*	S(SS)
Gray rat snake	*Elaphe obsoleta spiloides*	S(SS)
Green water snake	*Nerodia cyclopion*	S(SS)
Gulf crayfish snake	*Regina rigida sinicola*	S(SS)
Texas coral snake	*Micrurus fulvias cenere*	S(SS)
Anhinga	*Anhinga anhinga*	S(SS)
Great egret	*Casmeroidens albus*	S(SS)
Least bittern	*Ixobryehus exilis*	S(SS)
Hooded merganser	*Lophodytes cuccullatus*	S(SS)
Bald eagle	*Haliaeetus leucocephalus*	S(SS);F(T)
Common barn-owl	*Tyto alba*	S(SS)
Common moorhen	*Callinula chloropus*	S(SS)

RARE, THREATENED, AND ENDANGERED SPECIES IN THE REGION OF ABANDONMENTS AND/OR CONSTRUCTION SITES IN ARKANSAS
(continued)

Common Name	Scientific Name	Status
Interior least tern	*Sterna antillarum othalases*	
Red-cockaded woodpecker	*Picoides borealis*	F(E);S(SS)
Great-tailed grackle	*Quiscalus mexicanus*	S(SS)
Bachman's sparrow	*Aimophila aestivalis*	S(SS)
Grasshopper sparrow	*Ammodramus savannarum*	S(SS)
Backman's warbler	*Vermivora backmanii*	S(SS);F(E)
Swainson's warbler	*Limnothypis swainsonii*	S(SS)
Southern myotis	*Myotis austroriparius*	S(SS)
Florida panther	*Felis concolor coryi*	S(SS)
Arkansas meadow-rue	*Thalictrum arkananum*	S(T);F(C2)
Arkansas oak	*Quercus arakansana*	S(SS);F(C3)
Barbed rattlesnake root	*Prenanthes barbata*	S(SS)
Blueberry hawthorn	*Crat brachyacantha*	S(SS)
Bristly greenbriar	*Smilax tamnoides*	S(SS)
Brown creeper	*Certha americana*	S(SS)
Celestial lily	*Nemstylis geminiflora*	S(SS)
Climbing milkweed	*Matelea cyanchoides*	S(E)
Coral greenbrier	*Smilax walteri*	S(SS)
Corkwood	*Leitneria floridana*	S(SS)
Crotalaria	*Crotalaria angulata*	S(SS)
Devil's-bit	*Chamaelinum luteum*	S(SS)
Eastern featherbells	*Stenanthium gramineum*	S(SS)
Eve's necklace	*Sophora affinis*	S(SS)
Evening primrose	*Oenothera rhombipetala*	S(SS)
Foxglove	*Agalinis aspera*	S(SS)

RARE, THREATENED, AND ENDANGERED SPECIES IN THE REGION OF ABANDONMENTS AND/OR CONSTRUCTION SITES IN ARKANSAS
(continued)

Common Name	Scientific Name	Status
Golden colicroot	*Aletris aurea*	S(SS)
Golden-mane tickseed	*Coreopsis basalis*	S(SS)
Goldenrod	*Solidago nitida*	S(SS)
Green-eyes	*Berlandiera betonicifolia*	S(SS)
Hairy gramma	*Bouteloua hirsuta*	S(E)
Heliotrope	*Heliotropium convolvulaceum*	S(SS)
Hurter's spadeflower	*Scaphiopus holbrookii hurterii*	S(SS)
Hyssopleaf thoroughwort	*Eupatorium hyssopifolium*	S(SS)
Large clammy-weed	*Polanisia crosa*	S(SS)
Larkspur	*Delphinium carolinianum vimineum*	S(SS)
Little-leaved prairie clover	*Dalea phleodes microphylla*	S(T)
Long's stargrass	*Hypoxis lungii*	S(SS);F(C3)
Louisiana vetch	*Vicia ludoviciana*	S(SS)
Many-flowered wild-buckwheat	*Eriogonum multiflorum*	S(SS)
Milk-vetch	*Astagalus leptocarpus*	S(SS)
Nerve-ray	*Tetragenotheca ludoviciana*	S(E)
Pink heel-splitter	*Potamilus altus*	
Prairie clover	*Dalea villosangrisea*	S(E)
Purple pleat-leaf	*Alophia drummodii*	S(SS)
Red bay	*Persea palustris*	S(E)
Riddell's spike moss	*Selaginella arenicola ridellii*	S(SS)
Rose pogonia	*Pogonia ophioglossoides*	S(SS)
Scarlet beardtongue	*Penstemon murrayanus*	S(T)
Scratch-daisy	*Croptilon hookeranum*	S(SS)

RARE, THREATENED, AND ENDANGERED SPECIES IN THE REGION OF ABANDONMENTS AND/OR CONSTRUCTION SITES IN ARKANSAS
(continued)

Common Name	Scientific Name	Status
Scurf pea	*Psoralea digitata parvifolia*	S(T)
Sedge	*Balbostylis capillaris*	S(SS)
Shorthead redhorse	*Moxostoma macrolepidotum*	S(SS)
Showy prairie-gentian	*Eustoma grandiflorum*	S(SS)
Silky camellia	*Stewartia malacodendron*	S(E)
Smooth twistflower	*Streptanthus hyacinthoides*	S(T)
Soapwort gentian	*Gentiena saponaria*	S(SS)
Southern bog clubmoss	*Lycopodium appressum*	S(SS)
Southern lady's slipper	*Cypripedium kentuckiense*	S(SS)
Soxman's milk-vetch	*Astragalus soxmaniorum*	S(SS)
Spanish moss	*Tillandsia uspeoides*	S(SS)
Spiderwort	*Tradescantia reverchonii*	S(SS)
Stylisma	*Stylisma aquatica*	S(SS)
Stylisma	*Stylisma pickeringii pattersonii*	S(SS)
Sweetscent ladies' tresses	*Spiranthes odorata*	S(SS)
Three-way sedge	*Dulichium arundinaceum*	S(SS)
Tragia	*Tragia smallii*	S(SS)
Tuberous grass-pink	*Calopogon tuberosus*	S(SS)
Umbrella grass	*Puirena bushii*	S(SS)
Umbrella sedge	*Cyperus grayoides*	S(SS);F(C2)
Wild plum	*Prunus gracilis*	S(SS)
Woolly three-awn	*Aristida lanosa*	S(SS)
Yellow-creasted orchid	*Platanthera cristata*	S(SS)

F = Federal;
S = State;
(E) = Endangered;

RARE, THREATENED, AND ENDANGERED SPECIES IN THE REGION OF ABANDONMENTS AND/OR CONSTRUCTION SITES IN ARKANSAS

(concluded)

(T) = Threatened;
(C2) = Category 2 Candidate;
(C3) = Category 3 Candidate;
(SS) = Special Species, in several levels

ADDITIONAL INFORMATION ON RARE, THREATENED, AND ENDANGERED SPECIES IN THE AREA OF CONSTRUCTION SITES IN ARKANSAS

Location	Known and Potential Occurrence of Rare, Threatened, and Endangered Species in the Area
Camden	Scarlet beardtongue Smooth twistflower Silky camellia Red-cockaded woodpecker Lake sturgeon Anhinga Crystal darter Lake chubsucker Bird-voiced treefrog Texas coral snake Southern myotis Bluehead shiner Hurter's spadeflower Purple pleat-leaf Woolly three-awn Milk-vetch Soxman's milk-vetch Sedge Devil's-bit Golden-mane tickseed Umbrella sedge Larkspur Three-way sedge Many-flowered wild-buckwheat Evening primrose Large clammy-weed Arkansas oak Riddell's spike moss Coral greenbrier Goldenrod Stylisma (S. aquahea) Stylisma (S. pickeringii) Crotalaria Peppered shiner Darter Gulf crayfish snake

ADDITIONAL INFORMATION ON RARE, THREATENED, AND ENDANGERED SPECIES IN THE AREA OF CONSTRUCTION SITES IN ARKANSAS
(continued)

Location	Known and Potential Occurrence of Rare, Threatened, and Endangered Species in the Area
Pine Bluff-East	Red-cockaded woodpecker Bachman's sparrow Goldstripe darter Florida panther Common moorhen Bald eagle Least bittern Swainson's warbler Shorthead redhorse Green water snake Bluehead shiner Tailhead shiner Graham's crayfish snake Gulf crayfish snake Common barn-owl Tuberous grass-pink Devil's-bit Scratch-daisy Southern lady's slipper Hyssopleaf thoroughwort Showy prairie-gentian Umbrella grass Soapwort gentian Heliotrope Corkwood Celestial lily Yellow-creasted orchid Rose pogonia Barbed rattlesnake root
Pine Bluff-West	(same as Pine Bluff-East)

ADDITIONAL INFORMATION ON RARE, THREATENED, AND ENDANGERED SPECIES IN THE AREA OF CONSTRUCTION SITES IN ARKANSAS
(continued)

Location	Known and Potential Occurrence of Rare, Threatened, and Endangered Species in the Area
Texarkana-SE	Red-cockaded woodpecker Hairy gramma Climbing milkweed Red bay Scurf pea Nerve-ray Little-leaved prairie clover Prairie clover Smooth twistflower Arkansas meadow-rue Flat Floater Grasshopper sparrow Great egret Goldstripe darter Green water snake Blackspot shiner Red River shiner Great-tailed grackle Hurter's spadeflower Razorback musk turtle Foxglove Golden colicroot Purple pleat-leaf Woolly three-awn Milk vetch Soman's milk-vetch Green-eyes Sedge Blueberry hawthorn Larkspur Long's stargrass Southern bog clubmoss Evening primrose Wild plum Arkansas oak Riddell's spike moss Eve's necklace Sweetscent ladies' tresses Eastern featherbells Spanish moss Climbing milkweed Red bay Spiderwort Tragia Louisiana Vetch
Texarkana	(same as Texarkana-SE)
West Memphis	Flat floater Pink heel-splitter Brown creeper Gray rat snake Swamp darter Bald eagle Hooded merganser Taillight shiner Interior least tern Backman's warbler Bristly greenbriar

RARE, THREATENED, AND ENDANGERED SPECIES IN THE AREA OF ABANDONMENTS AND/OR CONSTRUCTION SITES IN CALIFORNIA

Common Name	Scientific Name	Status
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	F(T)
Delhi sands flower-loving fly	*Rhaphiomidas terminatus abdominalis*	F(E)
Lahontan cutthroat trout	*Onchorynchus clarki henshawi*	F(T)
California tiger salamander	*Ambystoma californiense*	(S)SS; F(E)
Coachella Valley fringe-toed lizard	*Uma inornata*	S(E); F(T)
Flat-tailed horned lizard	*Phrynosoma mealli*	S(SS); F(PT)
Giant garter snake	*Thamnophis gigas*	S(T); F(T)
Swainson's hawk	*Buteo swainsoni*	S(T)
Greater sandhill crane	*Grus canadensis tabida*	S(T)
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	S(E)
Northern spotted owl	*Strix occidentalis caurina*	F(T)
California gnatcatcher	*Polioptila californica*	S(SS); F(T)
Stephens' kangaroo rat	*Dipodomys stephensi*	S(T); F(E)
San Joaquin kit fox	*Vulpes macrotis mutica*	S(T); F(E)
California wolverine	*Gulo gulo luteus*	S(T); F(C2)
Large flowered fiddleneck	*Amsinckia grandiflora*	S(E); F(E)
Coachella Valley milk-vetch	*Astragalus lentiginosus coachellae*	F(PE)
Pierson's milk-vetch	*Astragalus magdalenae peirsonii*	S(E); F(PE)
Bogg's lake hedge-hyssop	*Gratiola heterosepala*	S(E); F(C3)
Algondone's Dunes sunflower	*Helianthus niveus tephrodes*	S(E); F(C2)
Santa Cruz tarplant	*Holocarpha macradenia*	S(E); F(C1)
California sea blite	*Sueda californica*	F(PE)

F = Federal;
S = State;
(E) = Endangered;
(PE) = Proposed Endangered;
(T) = Threatened;
(PT) = Proposed Threatened;
(C1) = Category 1 Candidate;
(C2) = Category 2 Candidate;
(C3) = Category 3 Candidate;
(SS) = Special Species, in several levels

RARE, THREATENED, AND ENDANGERED SPECIES IN THE REGION OF ABANDONMENTS AND/OR CONSTRUCTION SITES IN CALIFORNIA

Common Name	Scientific Name	Status
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	F(T)
Delhi sands flower-loving fly	*Rhaphiomidas terminatus abdominalis*	F(E)
Lahontan cutthroat trout	*Onchorynchus clarki henshawi*	F(T)
California tiger salamander	*Ambystoma californiense*	(S)SS; F(E)
Coachella Valley fringe-toed lizard	*Uma inornata*	S(E); F(T)
Flat-tailed horned lizard	*Phrynosoma mealli*	S(SS); F(PT)
Giant garter snake	*Thamnophis gigas*	S(T); F(T)
Swainson's hawk	*Buteo swainsoni*	S(T)
Greater sandhill crane	*Grus canadensis tabida*	S(T)
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	S(E)
Northern spotted owl	*Strix occidentalis caurina*	F(T)
California gnatcatcher	*Polioptila californica*	S(SS); F(T)
Stephens' kangaroo rat	*Dipodomys stephensi*	S(T); F(E)
San Joaquin kit fox	*Vulpes macrotis mutica*	S(T); F(E)
California wolverine	*Gulo gulo luteus*	S(T); F(C2)
Large flowered fiddleneck	*Amsinckia grandiflora*	S(E); F(E)
Coachella Valley milk-vetch	*Astragalus lentiginosus coachellae*	F(PE)
Pierson's milk-vetch	*Astragalus magdalenae peirsonii*	S(E); F(PE)
Bogg's lake hedge-hyssop	*Gratiola heterosepala*	S(E); F(C3)
Algondone's Dunes sunflower	*Helianthus niveus tephrodes*	S(E); F(C2)
Santa Cruz tarplant	*Holocarpha macradenia*	S(E); F(C1)
California sea blite	*Sueda californica*	F(PE)

F = Federal;
S = State;
(E) = Endangered;
(PE) = Proposed Endangered;
(T) = Threatened;
(PT) = Proposed Threatened;
(C1) = Category 1 Candidate;
(C2) = Category 2 Candidate;
(C3) = Category 3 Candidate;
(SS) = Special Species, in several levels

California

ENCLOSURE A

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CANDIDATE SPECIES THAT MAY OCCUR IN OR BE AFFECTED BY PROJECTS IN THE AREA OF THE FOLLOWING SELECTED QUADS:
Reference File No. 1-1-96-TA-25
October 12, 1995

QUAD : 465C OAKLAND EAST

Listed Species

Mammals

salt marsh harvest mouse, *Reithrodontomys raviventris* (E)

Birds

American peregrine falcon, *Falco peregrinus anatum* (E)
California brown pelican, *Pelecanus occidentalis californicus* (E)
California clapper rail, *Rallus longirostris obsoletus* (E)
bald eagle, *Haliaeetus leucocephalus* (T)

Fish

tidewater goby, *Eucyclogobius newberryi* (E)

Invertebrates

vernal pool fairy shrimp, *Branchinecta lynchi* (T)

Plants

robust spineflower, *Chorizanthe robusta* (E)
Presidio clarkia, *Clarkia franciscana* (E)

Proposed Species

Reptiles

Alameda whipsnake, *Masticophis lateralis euryxanthus* (PE)

Amphibians

California red-legged frog, *Rana aurora draytoni* (PE)

Invertebrates

callippe silverspot butterfly, *Speyeria callippe callippe* (PE)

Plants

pallid manzanita (Alameda manzanita), *Arctostaphylos pallida* (PT)

Candidate Species

Mammals

San Joaquin Valley woodrat, *Neotoma fuscipes riparia* (1)
greater western mastiff-bat, *Eumops perotis californicus* (2)
long-eared myotis bat, *Myotis evotis* (2)
fringed myotis bat, *Myotis thysanodes* (2)
long-legged myotis bat, *Myotis volans* (2)
Yuma myotis bat, *Myotis yumanensis* (2)
San Francisco dusky-footed woodrat, *Neotoma fuscipes annectens* (2)
San Joaquin pocket mouse, *Perognathus inoratus* (2)
Pacific western big-eared bat, *Plecotus townsendii townsendii* (2)
Alameda Island mole, *Scapanus latimanus parvus* (2)

California

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CANDIDATE SPECIES THAT MAY OCCUR IN OR BE AFFECTED BY PROJECTS IN THE AREA OF THE FOLLOWING SELECTED QUADS
Reference File No. 1-1-96-TA-25
October 12, 1995

QUAD : 465C OAKLAND EAST

Candidate Species

Birds

tricolored blackbird, *Agelaius tricolor* (2)
Bell's sage sparrow, *Amphispiza belli belli* (2)
ferruginous hawk, *Buteo regalis* (2)
little willow flycatcher, *Empidonax traillii brewsteri* (2)
saltmarsh common yellowthroat, *Geothlypis trichas sinuosa* (2)
black rail, *Laterallus jamaicensis* (2)
Alameda (South Bay) song sparrow, *Melospiza melodia maxillaris* (2)

Reptiles

northwestern pond turtle, *Clemmys marmorata marmorata* (2)
southwestern pond turtle, *Clemmys marmorata pallida* (2)
California horned lizard, *Phrynosoma coronatum frontale* (2)

Amphibians

California tiger salamander, *Ambystoma californiense* (1)
foothill yellow-legged frog, *Rana boylii* (2)
western spadefoot toad, *Scaphiopus hammondi* (2)

Invertebrates

Ricksecker's water scavenger beetle, *Hydrochara ricksecken* (2)
San Francisco lacewing, *Nothochrysa californica* (2)

Plants

most beautiful (uncommon) jewelflower, *Streptanthus albidus ssp. peramoenus* (1)
fragrant fritillary, *Fritillaria liliacea* (2)
Diablo rock-rose, *Helianthella castanea* (2)
Kellogg's (wedge-leaved) horkelia, *Horkelia cuneata ssp. sericea* (2)
alkali milk-vetch, *Astragalus tener var. tener* (2R)

QUAD : 466D OAKLAND WEST

Listed Species

Mammals

salt marsh harvest mouse, *Reithrodontomys raviventris* (E)

Birds

American peregrine falcon, *Falco peregrinus anatum* (E)
California brown pelican, *Pelecanus occidentalis californicus* (E)
California clapper rail, *Rallus longirostris obsoletus* (E)
California least tern, *Sterna antillarum (=albifrons) browni* (E)
western snowy plover, *Charadrius alexandrinus nivosus* (T)
bald eagle, *Haliaeetus leucocephalus* (T)

California

ENCLOSURE A

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CANDIDATE SPECIES THAT MAY OCCUR IN OR BE AFFECTED BY PROJECTS IN THE AREA OF THE FOLLOWING SELECTED QUADS
Reference File No. 1-1-96-TA-25
October 12, 1995

QUAD : 466D OAKLAND WEST

Listed Species

Fish

tidewater goby, *Eucyclogobius newberryi* (E)
winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)
winter-run chinook salmon crit. habitat, *Oncorhynchus tshawytscha* (E)

Proposed Species

Reptiles

Alameda whipsnake, *Masticophis lateralis euryxanthus* (PE)

Amphibians

California red-legged frog, *Rana aurora draytoni* (PE)

Fish

Coho salmon, *Oncorhynchus kisutch* (PT)
Sacramento splittail, *Pogonichthys macrolepidotus* (PT)

Candidate Species

Mammals

Berkeley kangaroo rat, *Dipodomys heermanni berkleyensis* (2)
greater western mastiff-bat, *Eumops perotis californicus* (2)
long-eared myotis bat, *Myotis evotis* (2)
fringed myotis bat, *Myotis thysanodes* (2)
long-legged myotis bat, *Myotis volans* (2)
Yuma myotis bat, *Myotis yumanensis* (2)
San Francisco dusky-footed woodrat, *Neotoma fuscipes annectens* (2)
Pacific western big-eared bat, *Plecotus townsendii townsendii* (2)
Alameda Island mole, *Scapanus latimanus parvus* (2)
salt marsh vagrant shrew, *Sorex vagrans halicoetes* (2)

Birds

tricolored blackbird, *Agelaius tricolor* (2)
Bell's sage sparrow, *Amphispiza belli belli* (2)
ferruginous hawk, *Buteo regalis* (2)
little willow flycatcher, *Empidonax traillii brewsteri* (2)
saltmarsh common yellowthroat, *Geothlypis trichas sinuosa* (2)
black rail, *Laterallus jamaicensis* (2)
Alameda (South Bay) song sparrow, *Melospiza melodia maxillaris* (2)

Reptiles

northwestern pond turtle, *Clemmys marmorata marmorata* (2)
southwestern pond turtle, *Clemmys marmorata pallida* (2)
California horned lizard, *Phrynosoma coronatum frontale* (2)

California

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CANDIDATE SPECIES THAT MAY OCCUR IN OR BE AFFECTED BY PROJECTS IN THE AREA OF THE FOLLOWING SELECTED QUADS
Reference File No. 1-1-96-TA-25
October 12, 1995

QUAD : 466D OAKLAND WEST

Candidate Species

Amphibians

California tiger salamander, *Ambystoma californiense* (1)
foothill yellow-legged frog, *Rana boylii* (2)

Fish

longfin smelt, *Spirinchus thaleichthys* (2)

Invertebrates

Bridges' Coast Range shoulderband snail, *Helminthoglpta nickliniana bridgesi* (2)
Ricksecker's water scavenger beetle, *Hydrochara ricksecker* (2)
San Francisco lacewing, *Nothochrysa californica* (2)

Plants

Santa Cruz tarweed, *Holocarpha macradenia* (1)
San Francisco Bay spineflower, *Chorizanthe cuspidata var. cuspidata* (2)
northcoast bird's-beak, *Cordylanthus maritimus ssp. palustris* (2)
Kellogg's (wedge-leaved) horkelia, *Horkelia cuneata ssp. sericea* (2)
adobe sanicle, *Sanicula maritima* (2)
alkali milk-vetch, *Astragalus tener var. tener* (2R)

QUAD : 620B LITTLE MUD FLAT

Listed Species

Birds

American peregrine falcon, *Falco peregrinus anatum* (E)
bald eagle, *Haliaeetus leucocephalus* (T)

Candidate Species

Mammals

pygmy rabbit, *Brachylagus idahoensis* (2)
spotted bat, *Euderma maculatum* (2)
small-footed myotis bat, *Myotis ciliolabrum* (2)
long-eared myotis bat, *Myotis evotis* (2)
fringed myotis bat, *Myotis thysanodes* (2)
long-legged myotis bat, *Myotis volans* (2)
Yuma myotis bat, *Myotis yumanensis* (2)
Pale Townsend's big-eared bat, *Plecotus townsendi pallescens* (2)

Birds

tricolored blackbird, *Agelaius tricolor* (2)
ferruginous hawk, *Buteo regalis* (2)

Reptiles

Northern sagebrush lizard, *Sceloporus graciosus graciosus* (2)

California

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CANDIDATE SPECIES THAT MAY OCCUR IN OR BE AFFECTED BY PROJECTS IN THE AREA OF THE FOLLOWING SELECTED QUADS
Reference File No. 1-1-96-TA-25
October 12, 1995

QUAD : 620C WENDEL

Listed Species

Birds

American peregrine falcon, *Falco peregrinus anatum* (E)
bald eagle, *Haliaeetus leucocephalus* (T)

Candidate Species

Mammals

pygmy rabbit, *Brachylagus idahoensis* (2)
spotted bat, *Euderma maculatum* (2)
small-footed myotis bat, *Myotis ciliolabrum* (2)
long-eared myotis bat, *Myotis evotis* (2)
fringed myotis bat, *Myotis thysanodes* (2)
long-legged myotis bat, *Myotis volans* (2)
Yuma myotis bat, *Myotis yumanensis* (2)
Pale Townsend's big-eared bat, *Plecotus townsendi pallescens* (2)

Birds

tricolored blackbird, *Agelaius tricolor* (2)
ferruginous hawk, *Buteo regalis* (2)
white-faced ibis, *Plegadis chihi* (2)

Reptiles

Northern sagebrush lizard, *Sceloporus graciosus graciosus* (2)

QUAD : 621A SHAFFER MTN.

Listed Species

Birds

American peregrine falcon, *Falco peregrinus anatum* (E)
bald eagle, *Haliaeetus leucocephalus* (T)

Candidate Species

Mammals

pygmy rabbit, *Brachylagus idahoensis* (2)
spotted bat, *Euderma maculatum* (2)
small-footed myotis bat, *Myotis ciliolabrum* (2)
long-eared myotis bat, *Myotis evotis* (2)
fringed myotis bat, *Myotis thysanodes* (2)
long-legged myotis bat, *Myotis volans* (2)
Yuma myotis bat, *Myotis yumanensis* (2)
Pale Townsend's big-eared bat, *Plecotus townsendi pallescens* (2)

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CANDIDATE SPECIES THAT MAY OCCUR IN OR BE AFFECTED BY PROJECTS IN THE AREA OF THE FOLLOWING SELECTED QUADS
Reference File No. 1-1-96-TA-25
October 12, 1995

QUAD : 621A SHAFFER MTN.

Candidate Species

Birds

tricolored blackbird, *Agelaius tricolor* (2)
western burrowing owl, *Athene cunicularia hypugea* (2)
ferruginous hawk, *Buteo regalis* (2)

Reptiles

Northern sagebrush lizard, *Sceloporus graciosus graciosus* (2)

QUAD : 639A SNOWSTORM MTN.

Listed Species

Birds

American peregrine falcon, *Falco peregrinus anatum* (E)
bald eagle, *Haliaeetus leucocephalus* (T)

Candidate Species

Mammals

pygmy rabbit, *Brachylagus idahoensis* (2)
spotted bat, *Euderma maculatum* (2)
small-footed myotis bat, *Myotis ciliolabrum* (2)
long-eared myotis bat, *Myotis evotis* (2)
fringed myotis bat, *Myotis thysanodes* (2)
long-legged myotis bat, *Myotis volans* (2)
Yuma myotis bat, *Myotis yumanensis* (2)
Pale Townsend's big-eared bat, *Plecotus townsendi pallescens* (2)

Birds

western burrowing owl, *Athene cunicularia hypugea* (2)
ferruginous hawk, *Buteo regalis* (2)

Reptiles

Northern sagebrush lizard, *Sceloporus graciosus graciosus* (2)

QUAD : 639B WEST OF SNOWSTORM MTN.

Listed Species

Birds

American peregrine falcon, *Falco peregrinus anatum* (E)
bald eagle, *Haliaeetus leucocephalus* (T)

California

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CANDIDATE SPECIES THAT MAY OCCUR IN OR BE AFFECTED BY PROJECTS IN THE AREA OF THE FOLLOWING SELECTED QUADS
Reference File No. 1-1-96-TA-25
October 12, 1995

QUAD : 639B WEST OF SNOWSTORM MTN.

Candidate Species

Mammals

pygmy rabbit, *Brachylagus idahoensis* (2)
spotted bat, *Euderma maculatum* (2)
small-footed myotis bat, *Myotis ciliolabrum* (2)
long-eared myotis bat, *Myotis evotis* (2)
fringed myotis bat, *Myotis thysanodes* (2)
long-legged myotis bat, *Myotis volans* (2)
Yuma myotis bat, *Myotis yumanensis* (2)
Pale Townsend's big-eared bat, *Plecotus townsendi pallescens* (2)

Birds

western burrowing owl, *Athene cunicularia hypugea* (2)
ferruginous hawk, *Buteo regalis* (2)

Reptiles

Northern sagebrush lizard, *Sceloporus graciosus graciosus* (2)

QUAD : 639C PETES VALLEY

Listed Species

Birds

American peregrine falcon, *Falco peregrinus anatum* (E)
bald eagle, *Haliaeetus leucocephalus* (T)

Candidate Species

Mammals

pygmy rabbit, *Brachylagus idahoensis* (2)
spotted bat, *Euderma maculatum* (2)
small-footed myotis bat, *Myotis ciliolabrum* (2)
long-eared myotis bat, *Myotis evotis* (2)
fringed myotis bat, *Myotis thysanodes* (2)
long-legged myotis bat, *Myotis volans* (2)
Yuma myotis bat, *Myotis yumanensis* (2)
Pale Townsend's big-eared bat, *Plecotus townsendi pallescens* (2)

Birds

western burrowing owl, *Athene cunicularia hypugea* (2)
ferruginous hawk, *Buteo regalis* (2)

Reptiles

Northern sagebrush lizard, *Sceloporus graciosus graciosus* (2)

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CANDIDATE SPECIES THAT MAY OCCUR IN OR BE AFFECTED BY PROJECTS IN THE AREA OF THE FOLLOWING SELECTED QUADS
Reference File No. 1-1-96-TA-25
October 12, 1995

QUAD : 639D KARLO

Listed Species

Birds

American peregrine falcon, *Falco peregrinus anatum* (E)
bald eagle, *Haliaeetus leucocephalus* (T)

Candidate Species

Mammals

pygmy rabbit, *Brachylagus idahoensis* (2)
spotted bat, *Euderma maculatum* (2)
small-footed myotis bat, *Myotis ciliolabrum* (2)
long-eared myotis bat, *Myotis evotis* (2)
fringed myotis bat, *Myotis thysanodes* (2)
long-legged myotis bat, *Myotis volans* (2)
Yuma myotis bat, *Myotis yumanensis* (2)
Pale Townsend's big-eared bat, *Plecotus townsendi pallescens* (2)

Birds

western burrowing owl, *Athene cunicularia hypugea* (2)
ferruginous hawk, *Buteo regalis* (2)

Reptiles

Northern sagebrush lizard, *Sceloporus graciosus graciosus* (2)

QUAD : 657B MCDONALD PEAK

Listed Species

Birds

American peregrine falcon, *Falco peregrinus anatum* (E)
bald eagle, *Haliaeetus leucocephalus* (T)

Candidate Species

Mammals

pygmy rabbit, *Brachylagus idahoensis* (2)
spotted bat, *Euderma maculatum* (2)
small-footed myotis bat, *Myotis ciliolabrum* (2)
long-eared myotis bat, *Myotis evotis* (2)
fringed myotis bat, *Myotis thysanodes* (2)
long-legged myotis bat, *Myotis volans* (2)
Yuma myotis bat, *Myotis yumanensis* (2)
Pale Townsend's big-eared bat, *Plecotus townsendi pallescens* (2)

Birds

ferruginous hawk, *Buteo regalis* (2)

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CANDIDATE SPECIES THAT MAY OCCUR IN OR BE AFFECTED BY PROJECTS IN THE AREA OF THE FOLLOWING SELECTED QUADS
Reference File No. 1-1-96-TA-25
October 12, 1995

QUAD : 657B MCDONALD PEAK

Candidate Species

Reptiles

Northern sagebrush lizard, *Sceloporus graciosus graciosus* (2)

Fish

Goose Lake redband trout, *Oncorhynchus (=Salmo) mykiss ssp.* (2)

QUAD : 657C TERMO

Listed Species

Birds

American peregrine falcon, *Falco peregrinus anatum* (E)
bald eagle, *Haliaeetus leucocephalus* (T)

Candidate Species

Mammals

pygmy rabbit, *Brachylagus idahoensis* (2)
spotted bat, *Euderma maculatum* (2)
small-footed myotis bat, *Myotis ciliolabrum* (2)
long-eared myotis bat, *Myotis evotis* (2)
fringed myotis bat, *Myotis thysanodes* (2)
long-legged myotis bat, *Myotis volans* (2)
Yuma myotis bat, *Myotis yumanensis* (2)
Pale Townsend's big-eared bat, *Plecotus townsendi pallescens* (2)

Birds

western burrowing owl, *Athene cunicularia hypugea* (2)
ferruginous hawk, *Buteo regalis* (2)

Reptiles

Northern sagebrush lizard, *Sceloporus graciosus graciosus* (2)

Fish

Goose Lake redband trout, *Oncorhynchus (=Salmo) mykiss ssp.* (2)

QUAD : 657D RAVENDALE

Listed Species

Birds

American peregrine falcon, *Falco peregrinus anatum* (E)
bald eagle, *Haliaeetus leucocephalus* (T)

California

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CANDIDATE SPECIES THAT MAY OCCUR IN OR BE AFFECTED BY PROJECTS IN THE AREA OF THE FOLLOWING SELECTED QUADS
Reference File No. 1-1-96-TA-25
October 12, 1995

QUAD : 657D RAVENDALE

Candidate Species

Mammals

pygmy rabbit, *Brachylagus idahoensis* (2)
spotted bat, *Euderma maculatum* (2)
small-footed myotis bat, *Myotis ciliolabrum* (2)
long-eared myotis bat, *Myotis evotis* (2)
fringed myotis bat, *Myotis thysanodes* (2)
long-legged myotis bat, *Myotis volans* (2)
Yuma myotis bat, *Myotis yumanensis* (2)
Pale Townsend's big-eared bat, *Plecotus townsendi pallescens* (2)

Birds

western burrowing owl, *Athene cunicularia hypugea* (2)
ferruginous hawk, *Buteo regalis* (2)

Reptiles

Northern sagebrush lizard, *Sceloporus graciosus graciosus* (2)

Fish

Goose Lake redband trout, *Oncorhynchus (=Salmo) mykiss ssp.* (2)

QUAD : 658A ANDERSON MTN.

Listed Species

Birds

American peregrine falcon, *Falco peregrinus anatum* (E)
bald eagle, *Haliaeetus leucocephalus* (T)

Fish

Delta smelt, *Hypomesus transpacificus* (T)

Candidate Species

Mammals

pygmy rabbit, *Brachylagus idahoensis* (2)
spotted bat, *Euderma maculatum* (2)
Pacific fisher, *Martes pennanti pacifica* (2)
small-footed myotis bat, *Myotis ciliolabrum* (2)
long-eared myotis bat, *Myotis evotis* (2)
fringed myotis bat, *Myotis thysanodes* (2)
long-legged myotis bat, *Myotis volans* (2)
Yuma myotis bat, *Myotis yumanensis* (2)
Pale Townsend's big-eared bat, *Plecotus townsendi pallescens* (2)

Birds

ferruginous hawk, *Buteo regalis* (2)

California

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CANDIDATE SPECIES THAT MAY OCCUR IN OR BE AFFECTED BY PROJECTS IN THE AREA OF THE FOLLOWING SELECTED QUADS
Reference File No. 1-1-96-TA-25
October 12, 1995

QUAD : 658A ANDERSON MTN.

Candidate Species

Fish

Pit Roach, *Lavinia symetricus mitrulus* (2)
Goose Lake redband trout, *Oncorhynchus (=Salmo) mykiss ssp.* (2)

QUAD : 674B TULE MOUNTAIN

Listed Species

Birds

American peregrine falcon, *Falco peregrinus anatum* (E)
bald eagle, *Haliaeetus leucocephalus* (T)

Fish

Delta smelt, *Hypomesus transpacificus* (T)

Candidate Species

Mammals

pygmy rabbit, *Brachylagus idahoensis* (2)
spotted bat, *Euderma maculatum* (2)
small-footed myotis bat, *Myotis ciliolabrum* (2)
long-eared myotis bat, *Myotis evotis* (2)
fringed myotis bat, *Myotis thysanodes* (2)
long-legged myotis bat, *Myotis volans* (2)
Yuma myotis bat, *Myotis yumanensis* (2)
California bighorn sheep, *Ovis canadensis californiana* (2)
Pale Townsend's big-eared bat, *Plecotus townsendi pallescens* (2)

Birds

ferruginous hawk, *Buteo regalis* (2)

Reptiles

Northern sagebrush lizard, *Sceloporus graciosus graciosus* (2)

Fish

Pit Roach, *Lavinia symetricus mitrulus* (2)
Goose Lake redband trout, *Oncorhynchus (=Salmo) mykiss ssp.* (2)

QUAD : 674C MADELINE

Listed Species

Birds

American peregrine falcon, *Falco peregrinus anatum* (E)
bald eagle, *Haliaeetus leucocephalus* (T)

California

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CANDIDATE SPECIES THAT MAY OCCUR IN OR BE AFFECTED BY PROJECTS IN THE AREA OF THE FOLLOWING SELECTED QUADS
Reference File No. 1-1-96-TA-25
October 12, 1995

QUAD : 674C MADELINE

Listed Species

Fish

Delta smelt, *Hypomesus transpacificus* (T)

Candidate Species

Mammals

pygmy rabbit, *Brachylagus idahoensis* (2)
spotted bat, *Euderma maculatum* (2)
small-footed myotis bat, *Myotis ciliolabrum* (2)
long-eared myotis bat, *Myotis evotis* (2)
fringed myotis bat, *Myotis thysanodes* (2)
long-legged myotis bat, *Myotis volans* (2)
Yuma myotis bat, *Myotis yumanensis* (2)
California bighorn sheep, *Ovis canadensis californiana* (2)
Pale Townsend's big-eared bat, *Plecotus townsendi pallescens* (2)

Birds

ferruginous hawk, *Buteo regalis* (2)

Reptiles

Northern sagebrush lizard, *Sceloporus graciosus graciosus* (2)

Fish

Pit Roach, *Lavinia symetricus mitrulus* (2)
Goose Lake redband trout, *Oncorhynchus (=Salmo) mykiss ssp.* (2)

QUAD : 675A LIKELY

Listed Species

Birds

American peregrine falcon, *Falco peregrinus anatum* (E)
bald eagle, *Haliaeetus leucocephalus* (T)

Fish

Delta smelt, *Hypomesus transpacificus* (T)

Candidate Species

Mammals

pygmy rabbit, *Brachylagus idahoensis* (2)
spotted bat, *Euderma maculatum* (2)
small-footed myotis bat, *Myotis ciliolabrum* (2)
long-eared myotis bat, *Myotis evotis* (2)
fringed myotis bat, *Myotis thysanodes* (2)
long-legged myotis bat, *Myotis volans* (2)

California

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CANDIDATE SPECIES THAT MAY OCCUR IN OR BE AFFECTED BY PROJECTS IN THE AREA OF THE FOLLOWING SELECTED QUADS
Reference File No. 1-1-96-TA-25
October 12, 1995

QUAD : 675A LIKELY

Candidate Species

Mammals

Yuma myotis bat, *Myotis yumanensis* (2)

Pale Townsend's big-eared bat, *Plecotus townsendi pallescens* (2)

Birds

ferruginous hawk, *Buteo regalis* (2)

Reptiles

Northern sagebrush lizard, *Sceloporus graciosus graciosus* (2)

Fish

Pit Roach, *Lavinia symetricus mitrulus* (2)

Goose Lake redband trout, *Oncorhynchus (=Salmo) mykiss ssp.* (2)

Plants

Ash Creek ivesia, *Ivesia paniculata* (2)

QUAD : 692A ALTURAS

Listed Species

Birds

American peregrine falcon, *Falco peregrinus anatum* (E)

bald eagle, *Haliaeetus leucocephalus* (T)

Fish

Delta smelt, *Hypomesus transpacificus* (T)

Candidate Species

Mammals

pygmy rabbit, *Brachylagus idahoensis* (2)

spotted bat, *Euderma maculatum* (2)

small-footed myotis bat, *Myotis ciliolabrum* (2)

long-eared myotis bat, *Myotis evotis* (2)

fringed myotis bat, *Myotis thysanodes* (2)

long-legged myotis bat, *Myotis volans* (2)

Yuma myotis bat, *Myotis yumanensis* (2)

Pale Townsend's big-eared bat, *Plecotus townsendi pallescens* (2)

Birds

ferruginous hawk, *Buteo regalis* (2)

Reptiles

Northern sagebrush lizard, *Sceloporus graciosus graciosus* (2)

Amphibians

spotted frog, *Rana pretiosa* (2)

California

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CANDIDATE SPECIES THAT MAY OCCUR IN OR BE AFFECTED BY PROJECTS IN THE AREA OF THE FOLLOWING SELECTED QUADS
Reference File No. 1-1-96-TA-25
October 12, 1995

QUAD : 692A ALTURAS

Candidate Species

Fish

Pit Roach, *Lavinia symetricus mitrulus* (2)

Goose Lake redband trout, *Oncorhynchus (=Salmo) mykiss ssp.* (2)

Plants

prostrate buckwheat, *Eriogonum prociduum* (2)

QUAD : 692D BAYLEY

Listed Species

Birds

American peregrine falcon, *Falco peregrinus anatum* (E)

bald eagle, *Haliaeetus leucocephalus* (T)

Fish

Delta smelt, *Hypomesus transpacificus* (T)

Candidate Species

Mammals

pygmy rabbit, *Brachylagus idahoensis* (2)

spotted bat, *Euderma maculatum* (2)

small-footed myotis bat, *Myotis ciliolabrum* (2)

long-eared myotis bat, *Myotis evotis* (2)

fringed myotis bat, *Myotis thysanodes* (2)

long-legged myotis bat, *Myotis volans* (2)

Yuma myotis bat, *Myotis yumanensis* (2)

Pale Townsend's big-eared bat, *Plecotus townsendi pallescens* (2)

Birds

ferruginous hawk, *Buteo regalis* (2)

Reptiles

Northern sagebrush lizard, *Sceloporus graciosus graciosus* (2)

Amphibians

spotted frog, *Rana pretiosa* (2)

Fish

Pit Roach, *Lavinia symetricus mitrulus* (2)

Goose Lake redband trout, *Oncorhynchus (=Salmo) mykiss ssp.* (2)

California

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CANDIDATE SPECIES THAT MAY OCCUR IN OR BE AFFECTED BY PROJECTS IN THE AREA OF THE FOLLOWING SELECTED QUADS

Reference File No. 1-1-96-TA-25

October 12, 1995

Notes:

(E) Endangered (T) Threatened (P) Proposed (CH) Critical Habitat

(1) Category 1: Taxa for which the Fish and Wildlife Service has sufficient biological information to support a proposal to list as endangered or threatened.

(2) Category 2: Taxa for which existing information indicated may warrant listing, but for which substantial biological information to support a proposed rule is lacking.

(1R) Recommended for Category 1 status.

(2R) Recommended for Category 2 status.

( ) Listing petitioned.

(*) Possibly extinct.

Illinois

Marion County
Federal
Endangered and Threatened
Species List

Species

INDIANA BAT (E) MYOTIS SODALIS

E = Endangered, T = Threatened

The above list of Federal endangered and threatened species was updated May 1992. It does not include state listed endangered and threatened species. For state listings contact the Illinois Division of Natural Heritage, Endangered Species Protection Board.

Attached are fact sheets for each species listed above.

Marion County
State
Endangered and Threatened
Species List

The following list of State endangered and threatened species was provided by the Illinois Department of Conservation Division of Natural Heritage and the Illinois Endangered Species Protection Board, November, 1991. Since this information changes frequently updated list for specific projects should be obtained from the Board. State Listing column: LT = Threatened listing, LE = Endangered listing.

SCIENTIFIC NAME	COMMON NAME	STATE LISTING
ASIO FLAMMEUS	SHORT-EARED OWL	LE
BARTRAMIA LONGICAUDA	UPLAND SANDPIPER	LE
CIRCUS CYANEUS	NORTHERN HARRIER	LE
TYMPANUCHUS CUPIDO	GREATER PRAIRIE-CHICKEN	LE
VILLOSA LIENOSA	LITTLE SPECTACLE CASE MUSSEL	LE
SABATIA CAMPESTRIS	PRAIRIE PINK	LE
UNIOMERUS TETRALASMUS	PONDHORN	LT
ACCIPITER COOPERII	COOPER'S HAWK	LE
LANIUS LUDOVICIANUS	LOGGERHEAD SHRIKE	LT
TRIFOLIUM REFLEXUM	BUFFALO CLOVER	LE

INDIANA BAT

Myotis sodalis (Miller and Allen)

Order: Chiroptera

Family: Vespertilionidae

Description: A medium-size myotis, closely resembling the little brown bat (Myotis lucifugus) but differing in coloration, the fur being a dull grayish chestnut rather than bronze, with the basal portion of the hairs of the back dull lead colored; coloration of underparts pinkish to cinnamon, hind feet smaller and more delicate than in M. lucifugus; calcar strongly keeled.

Distribution: Midwest and eastern United States from the western edge of Ozark region in Oklahoma to central Vermont, to southern Wisconsin, and as far south as northern Florida. Distribution is associated with major cavernous limestone areas and areas just north of cave regions. (Hall, 1962).

Former Distribution: Probably about the same, although there is evidence that many caves within the range of the species have been abandoned since 1950.

Status: Endangered. Decreasing in numbers.

Estimated numbers: About 500,000.

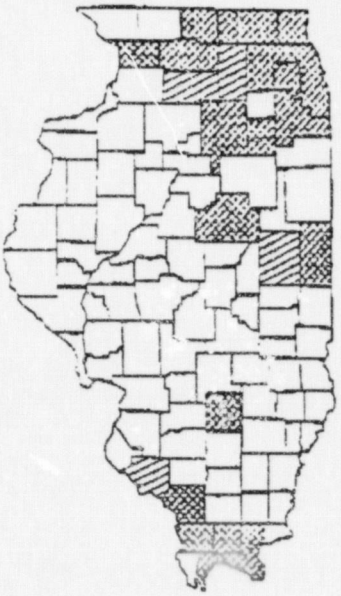
Breeding rate in the wild: Usually a single young in late June.

Reasons for decline: Commercialization of caves in which Indiana bats roost. Wanton destruction of large numbers of Indiana bats by vandals. (John S. Hall reported in personal communication, 1965, that a few years ago two boys killed about 10,000 Myotis sodalis in Carter Cave, Kentucky, in just a few minutes.) Roosts being disturbed by increasing numbers of spelunkers and others seeking recreation. Disturbances during bat banding programs. Colonies frequently raided for laboratory experimental animals. Insecticide poisoning may possibly be new threat. The species has a fairly restricted geographic range and shows a high degree of aggregation in the winter, when over 90 per cent of the estimated population occurs in only four caves. This high degree of aggregation makes the species very vulnerable.

Protective measures already taken: American Society of Mammalogists appointed a committee in the fall of 1963 to investigate the problem of reduction in bat populations; resolution approved by American Society of Mammalogists on June 17, 1964, that removal of bats from caves be discouraged except for scientific research and that molestation of bats in roosts or other unnecessary disturbance be discontinued. Construction of a gate across entrance to Carter Cave, Kentucky, where over 100,000

Accipiter cooperii (Bonaparte)

COOPER'S HAWK — ACCIPITRIDAE — Status: Endangered in Illinois



Present Distribution: One of the 3 North American accipiters, the Cooper's hawk breeds from British Columbia, central Saskatchewan and Nova Scotia south to Baja California, Northern Mexico and the southeastern U.S.. Wintering birds occur north to southern New England and British Columbia. In Illinois this species is a rare summer resident and an uncommon migrant and winter resident (Bohlen 1989).

Former Illinois Distribution: This woodland raptor was formerly considered to be relatively common throughout all the wooded portions of the state (Ridgway 1889).

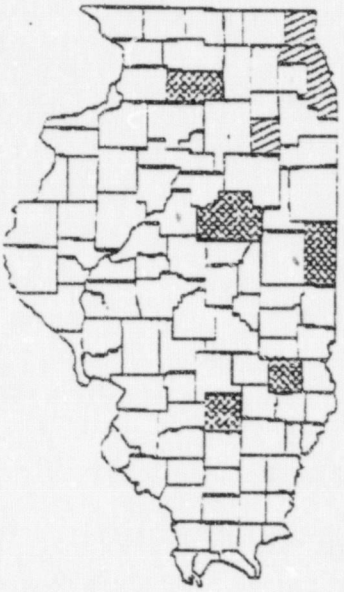
Habitat: The Cooper's hawk prefers mature deciduous forests but also occurs in open woodland and forest edge. The nest consists of a bulky platform of sticks and twigs usually placed near the trunk in a tall tree.

Reason for Status: Continental populations of the Cooper's hawk have recently stabilized following a severe decline during the 1970s, probably due to the banning of DDT (Ehrlich et al. 1988). However, the Illinois breeding population is still very low with recent nesting known from only 21 Illinois counties.

Management Recommendations: The preservation of large forest trees for nest sites and the protection of known nesting areas from human disturbance would be the most beneficial management for this species in Illinois.

Asio flammeus (Pontoppidan)

SHORT-EARED OWL — STRIGIDAE — Status: Endangered in Illinois



Present Distribution: In North America, short-eared owls breed locally from Alaska and northern Canada south to New Jersey and California. They winter from the southern part of their breeding range to as far south as Guatemala. This owl is a rare summer resident and an uncommon migrant and winter resident throughout the state (Bohlen 1989). In 1990 this species nested at 5 locations in Jasper, Lee, Marion and McLean counties, the first documented nesting in the state since 1973.

Former Illinois Distribution: Cory (1909) believed this owl nested in Cook County, and Ford (1956) emphasized an erratic nesting behavior in Illinois. Sporadic nesting probably formerly occurred across the northern half of Illinois wherever appropriate habitat was available. Wintering birds have apparently always been locally common in Illinois.

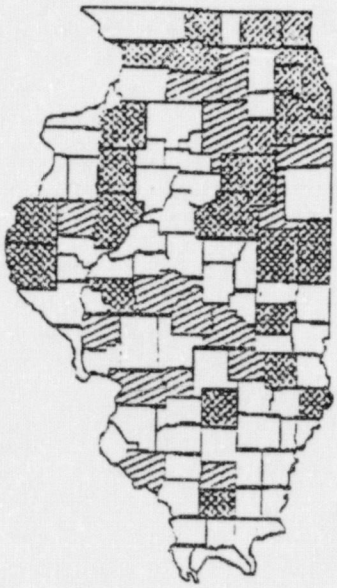
Habitat: The short-eared owl nests on the ground in open country including prairies, meadows, marshes, savanna and dunes. In Illinois the short-eared owl may prefer wet prairie habitats (Birkenholz 1975). However, recent nesting also has occurred in agricultural set-aside land. Nearly all of the recent nest records for Illinois are from grassland areas at least 50 ha in size.

Reason for Status: Destruction of grassland and wetland habitat have probably been the primary factors creating the precarious status of this owl as a breeding species in Illinois. The extremely low breeding population and erratic nesting behavior make the short-eared owls' continued presence unpredictable even in known nesting areas.

Management Recommendations: Since most recent nesting of this species in Illinois is from large grassland areas, the preservation of large blocks of prairie and marsh habitat appear essential. Further research may show that specific management techniques, such as prescribed burning, influence nesting behavior.

Bartramia longicauda (Bechstein)

UPLAND SANDPIPER — **SCOLOPACIDAE** — **Status:** Endangered in Illinois



Present Distribution: This grassland species breeds from Alaska and central Canada to the central U.S., and winters in southern South America. It occurs as an uncommon summer resident and migrant throughout Illinois (Bohlen 1989).

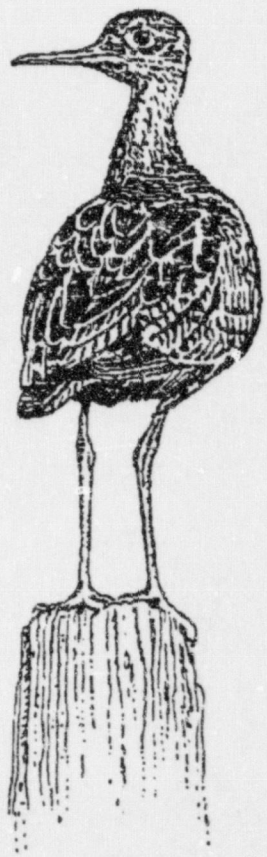
Former Illinois Distribution: The upland sandpiper was once a very common summer resident throughout Illinois (Nelson 1876b, Ridgway 1895, Ford 1956). However, it was hunted nearly to extinction before it was given protection (Ridgway 1915).

Habitat: In Illinois the upland sandpiper usually inhabits prairies, pastureland and hayfields with an average grass height less than 30 cm (Graber and Graber 1963, Buhnerkempke and Westemeier 1988). However, late spring burns and drought may allow this species to utilize areas of normally taller grasses. Grasslands adjacent to airports also are sometimes utilized by this species in Illinois (Becker 1980).

Reason for Status: The upland sandpiper has shown some signs of a weak recovery but is still scarce when compared to early records. The continued loss and fragmentation of grassland habitat (pasture, hayfields, and upland prairie) continues to threaten this species' survival in Illinois.

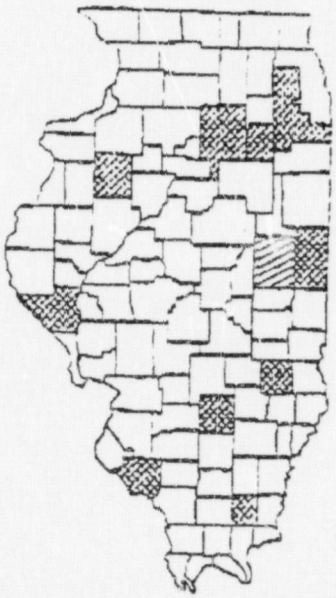
Management Recommendations: Preservation and proper management of large grassland areas are critical for this species. Prescribed burning or mowing is essential in order to provide suitable nesting areas. A reduction in disturbance levels in pastures and hayfields also would benefit this species.

Bartramia longicauda
(Upland Sandpiper)



Circus cyaneus Linnaeus

NORTHERN HARRIER — **ACCIPITRIDAE** — **Status:** Endangered in Illinois



Present Distribution: The northern harrier nests from Alaska, the Mackenzie District, and Newfoundland south to Virginia and northern Mexico and winters south from British Columbia, Wisconsin, and New Brunswick. It is an occasional summer resident and a common migrant and winter resident in open country throughout Illinois (Bohlen 1989).

Former Illinois Distribution: Ridgway (1889) described the northern harrier as a species of very extensive distribution in Illinois, but also noted that very little was known about it habits.

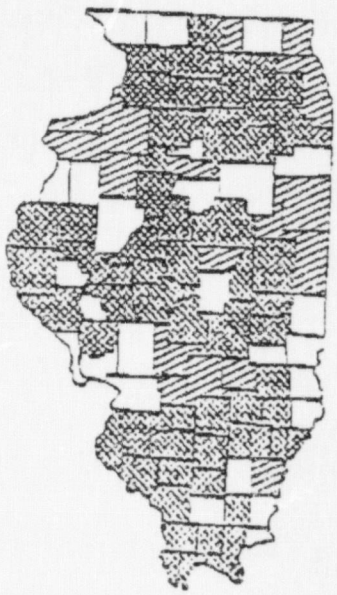
Habitat: In Illinois, harriers are most often observed during migration as they hunt over pastures and fallow fields. Nesting is usually restricted to relatively large undisturbed grasslands and marshes. Most harrier nests in Illinois occur in grasslands at least 60 ha in size and include a variety of cover types such as prairie grasses, brome, timothy, and fallow fields and even wheat fields. The nest is usually placed on the ground in a mound of dead reeds or grasses (Bull and Farrand 1977).

Reason for Status: As a breeding bird, this species is rare in Illinois. Destruction of marsh and prairie nest habitat probably led to the decline of its once wide distribution. The population decline, present status, and habitat of this species parallel those of the short-eared owl.

Management Recommendations: Preservation of large blocks of prairie and marsh habitat are essential for this species. Further research into nesting behavior as it relates to prairie management also would be beneficial in protecting this species.

Lanius ludovicianus Linnaeus

LOGGERHEAD SHRIKE — **LANIIDAE** — **Status:** Threatened in Illinois



Present Distribution: The loggerhead shrike breeds from southern Canada south to southern Florida, the Gulf Coast, and southern Mexico. Wintering birds occur north to Virginia, the Midwest, and northern California. The loggerhead shrike is a common resident in the southern third of Illinois and an uncommon migrant and summer resident elsewhere in the state.

Former Illinois Distribution: Prior to 1900 the shrike was distributed statewide, adapting to osage orange hedgerows for nesting and feeding. With the elimination of the hedgerows, the central and northern Illinois populations declined steadily and were almost entirely eliminated by 1972 (Graber et al. 1973).

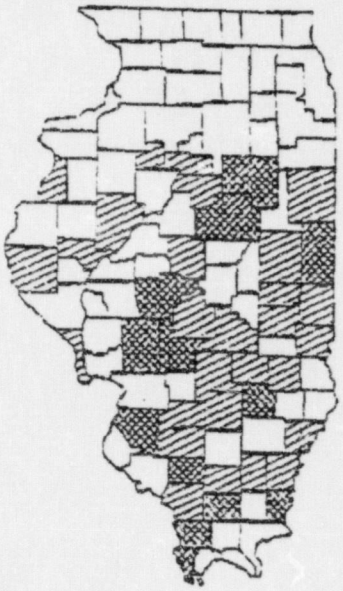
Habitat: In the Midwest, loggerhead shrikes inhabit open, agricultural areas interspersed with grassland habitat (Brooks and Temple 1990a). Most of the nests found in Illinois are in osage orange, honey locust, red cedar and rose.

Reason for Status: Shrike populations in Illinois declined dramatically between the 1950s and the early 1970s (Graber et al. 1973). Shrikes remain relatively uncommon in Illinois but the population is apparently stable and possibly even currently increasing in some parts of the state.

Management Recommendations: The primary management needs of the loggerhead shrike in Illinois are the preservation of hedgerows and other thorny species, interspersed with large, open grassland areas. Brooks and Temple (1990b), however, suggest that recent shrike declines in the upper Midwest may be due to low overwinter survival caused by factors outside their breeding range.

Uniomerus tetralasmus (Say)

PONDHORN | UNIONIDAE | Status: Threatened in Illinois



Present Distribution: The pondhorn occurs in the Mississippi River drainage from Iowa, Illinois, and Indiana, south to Louisiana, east to Tennessee and west to Colorado, Oklahoma and Texas (Parmalee 1967). In Illinois this mussel is sporadic and locally common in small creeks and sloughs in the southern three fourths of the state.

Former Illinois Distribution: The pondhorn was formerly widely distributed in Illinois, occurring throughout much of the state except for the northeastern quarter (Parmalee 1967). Despite its wide geographic range it was also considered to be uncommon in Illinois and only locally numerous (Parmalee 1967).

Habitat: The pondhorn inhabits ponds, sloughs, lakes, and quiet rivers, where it is usually found in areas with a mud substrate and shallow water (Parmalee 1967).

Reason for Status: The primary threats to this species in Illinois are declining water quality and habitat degradation as a result of agricultural runoff and industrial and municipal pollution.

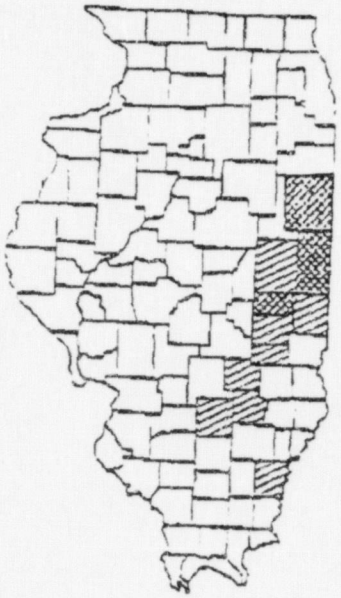
Management Recommendations: This species would benefit from better soil conservation measures designed to reduce agricultural runoff and pollution. Improved protection from industrial and domestic pollution would also benefit this species.

Villosa lienosa (Conrad)

LITTLE SPECTACLECASE

UNIONIDAE

Status: Endangered in Illinois



Present Distribution: The little spectaclecase is known from the Ohio and Wabash drainages. In Illinois, it is presently restricted to the Wabash River drainage where it occurs in the Embarras, Little Vermilion, and Vermilion rivers.

Former Illinois Distribution: The little spectaclecase historically occurred in the Vermilion, Embarras and Little Wabash rivers (K.S. Cummings unpublished data), but now is very sporadic in occurrence in southern and eastern Illinois.

Habitat: This species inhabits streams and small rivers, and is usually found in shallow water on a sand/mud bottom (Parmalee 1967).

Reason for Status: Increased siltation, domestic, industrial, and agricultural pollution, and competition from exotic mussel species are all potential threats to this species in Illinois.

Management Recommendations: This species would benefit from better soil conservation measures designed to reduce agricultural runoff and pollution. Improved protection from industrial and municipal pollution would also benefit this species.

East Part of County

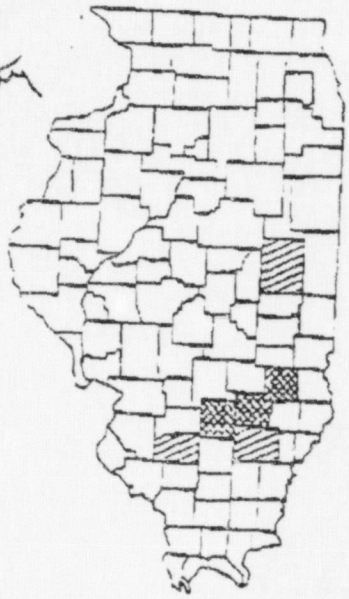
Tympanuchus cupido (Linnaeus)

GREATER PRAIRIE-CHICKEN

PHASIANIDAE

Status: Endangered in Illinois

North East Part of County



Present Distribution: The greater prairie-chicken occurs locally from Manitoba south through the Great Plains to Oklahoma, and on the coastal prairies of Texas. This species is a very rare and local permanent resident in south-central Illinois, with remnant flocks of fewer than 40 birds each in Jasper and Marion counties, and a few individuals in Clay County.

Former Illinois Distribution: The prairie-chicken once was abundant in the prairie regions throughout the northern two-thirds of Illinois. The initial opening of the prairie and forests to agriculture in Illinois benefitted the greater prairie-chicken and the population reached an estimated peak of approximately 10 million birds by 1860 (Westemeier and Edwards 1987). Prairie-chicken numbers began to decline shortly after reaching their peak abundance, however, and soon after 1900 they were considered to be on the brink of extinction in Illinois (Ridgway 1915).

Habitat: In Illinois, prairie-chickens no longer inhabit native prairie habitat but occur on intensely managed preserves. Through the use of reseeding and prescribed burning, optimum nesting habitat of second-, third-, and fourth-year grass growth is maintained. Native grasses are being reintroduced into sanctuaries and managed with a prescribed burning program. Well-drained, open booming grounds also are critical for the breeding activity of this species.

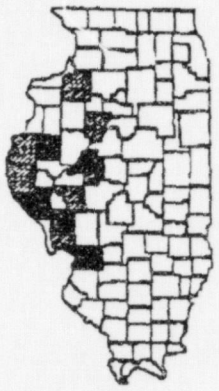
Reason for Status: Under tremendous pressure from hunting, egg collecting and habitat loss, the Illinois population of this once abundant species has declined to but a meager representation of its former abundance. If it were not for the intensive efforts of the Illinois Natural History Survey, The Nature Conservancy, and the Illinois Department of Conservation this species would certainly have been extirpated from Illinois. Booming ground harassment and nest parasitism by pheasants and predation pose additional threats to the species' already precarious status in the state.

Management Recommendations: Illinois populations of the greater prairie-chicken are managed by the Illinois Natural History Survey and the Illinois Department of Conservation. Land acquisition and management through sharecropping, seeding of required grass species, and prescribed burning are primary management tools (Westemeier 1972).

Illinois

Tradescantia bracteata Small

PRAIRIE SPIDERWORT — **COMMELINACEAE**

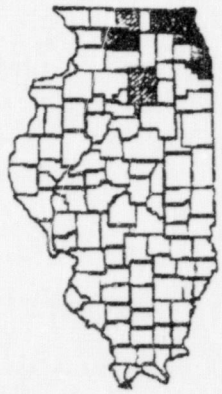


Status: Endangered in Illinois.
Habit: Rhizomatous perennial herb, 5 to 45 cm high.
Range: North-central United States, near its eastern range limit in Illinois.

Tradescantia bracteata occurs in dry-mesic silt and sand prairies in western Illinois, often in disturbed habitats. Presently it is known from seven localities in Illinois. None of the populations are protected, although several are along railroad and highway rights-of-way. The report of this species from Winnebago County is based on a cultivated plant.
References: Winterringer (1958), Henry (1986), Bowles (1991), Bowles *et al.* (1991).

Trientalis borealis Raf.

STAR-FLOWER — **PRIMULACEAE**

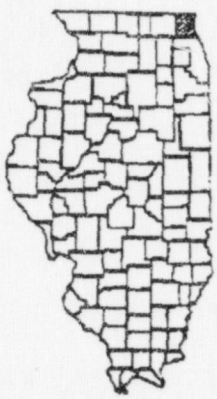


Status: Threatened in Illinois.
Habit: Rhizomatous perennial herb, stem 10-20 cm high.
Range: Boreal eastern and central Canada, south into northwestern United States.

Trientalis borealis reaches the southern margin of its range in northern Illinois, where it occurs in bog., mesic sand forests, and along Lake Michigan ravine bluffs. Presently five Illinois populations are known to be extant, including three in state nature preserves.
References: Waterman (1923), Fell and Fell (1957), Iltis and Shaughnessy (1960), Sheviak and Haney (1973), Anderson and Loucks (1973), Moran (1978), Anderson and Beare (1983), Taft and Solecki (1990).

Triadenum virginicum (L.) Raf.

MARSH ST. JOHN'S WORT — **CLUSIACEAE**

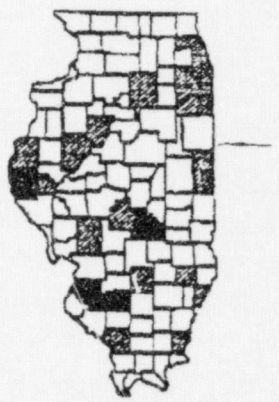


Status: Endangered in Illinois.
Synonym: *Hypericum virginicum* L.
Habit: Erect perennial herb, 30-60 cm high.
Range: Eastern United States and adjacent Canada.

In Illinois, *Triadenum virginicum* is known only from peaty sand prairies bordering Lake Michigan, where it was collected in 1972 from a Lake County state park. Although it has not been relocated at this site, extensive habitat remains, and it is likely the species remains extant in Illinois.
References: Mohlenbrock and Evans (1974), Bowles *et al.* (1991).

Trifolium reflexum L.

BUFFALO CLOVER — **FABACEAE**

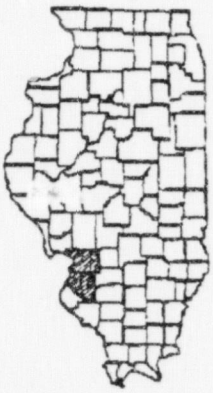


Status: Endangered in Illinois.
Habit: Annual or biennial herb, stems branched, 20-50 cm high.
Range: Eastern and central United States and adjacent Canada.

A plant of dry-mesic savannas, flatwoods, and prairies, *Trifolium reflexum* has been nearly extirpated from Illinois. This species appears to be disturbance-adapted and has been found to occur in sites that are burned or regularly affected by minor disturbances such as mowing, flooding, or erosion. Presently, four populations are known in Illinois, including an Adams County state park and a privately protected flatwoods area in Washington County. A 1947 Cook County collection site no longer has an extant population. In 1981 it was reported from Fayette County, but the status of this station is unknown.
References: Vasey (1870), Jones (1952), Campbell *et al.* (1988), Schwegman (1990).

Rumex hastatulus Baldw.

SOUR DOCK — **POLYGONACEAE**

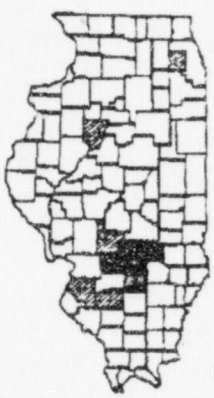


Status: Endangered in Illinois.
Habit: Annual herb, stems 0.15-1.3 m high.
Range: Eastern United States.

Rumex hastatulus reaches its northern range limit in a small area of southwestern Illinois, where it has been reported from sandy areas, barrens, and hill prairies. The only modern collection from Illinois is a 1960 specimen from a sandy area near the Mississippi River in St. Clair County. The species may still occur in Illinois in this collection area.
References: Glassman (1942), Bowles *et al.* (1991).

Sabatia campestris Nutt.

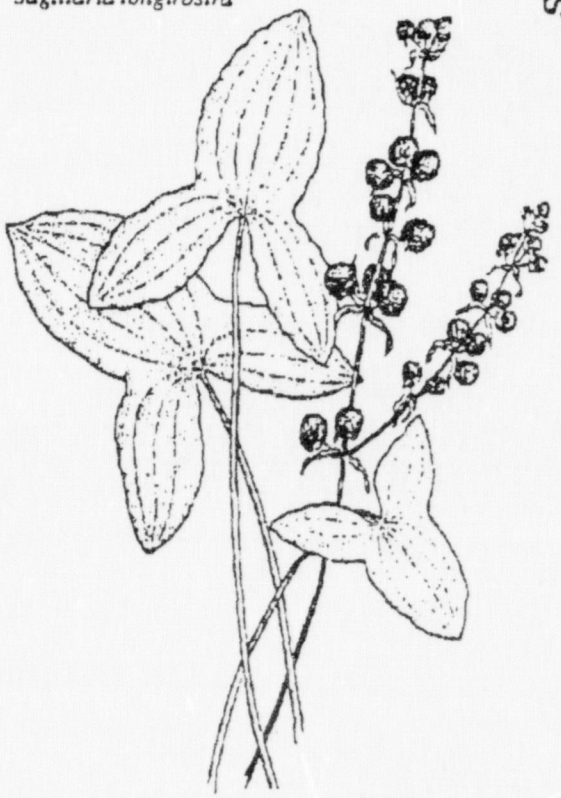
PRAIRIE ROSE GENTIAN — **GENTIANACEAE**



Status: Endangered in Illinois.
Habit: Branching annual herb, 20-40 cm high.
Range: South-central United States.

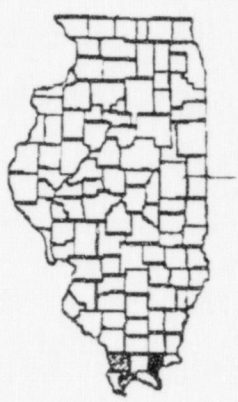
A plant of mesic prairies, *Sabatia campestris* reaches its eastern and northern range limit in Illinois. This species was formerly more common in Illinois, but has been almost eliminated by the destruction of its habitat. Until recently, a Bond County station contained the only known extant Illinois population of this species. Between 1982-1983, eight more stations were found or rediscovered in Effingham, Fayette, and Marion counties. This annual species is erratic in appearance, however, and only two stations have been successfully relocated during recent searches.
References: Jones (1947), Wilbur (1955).

Sagittaria longirostra



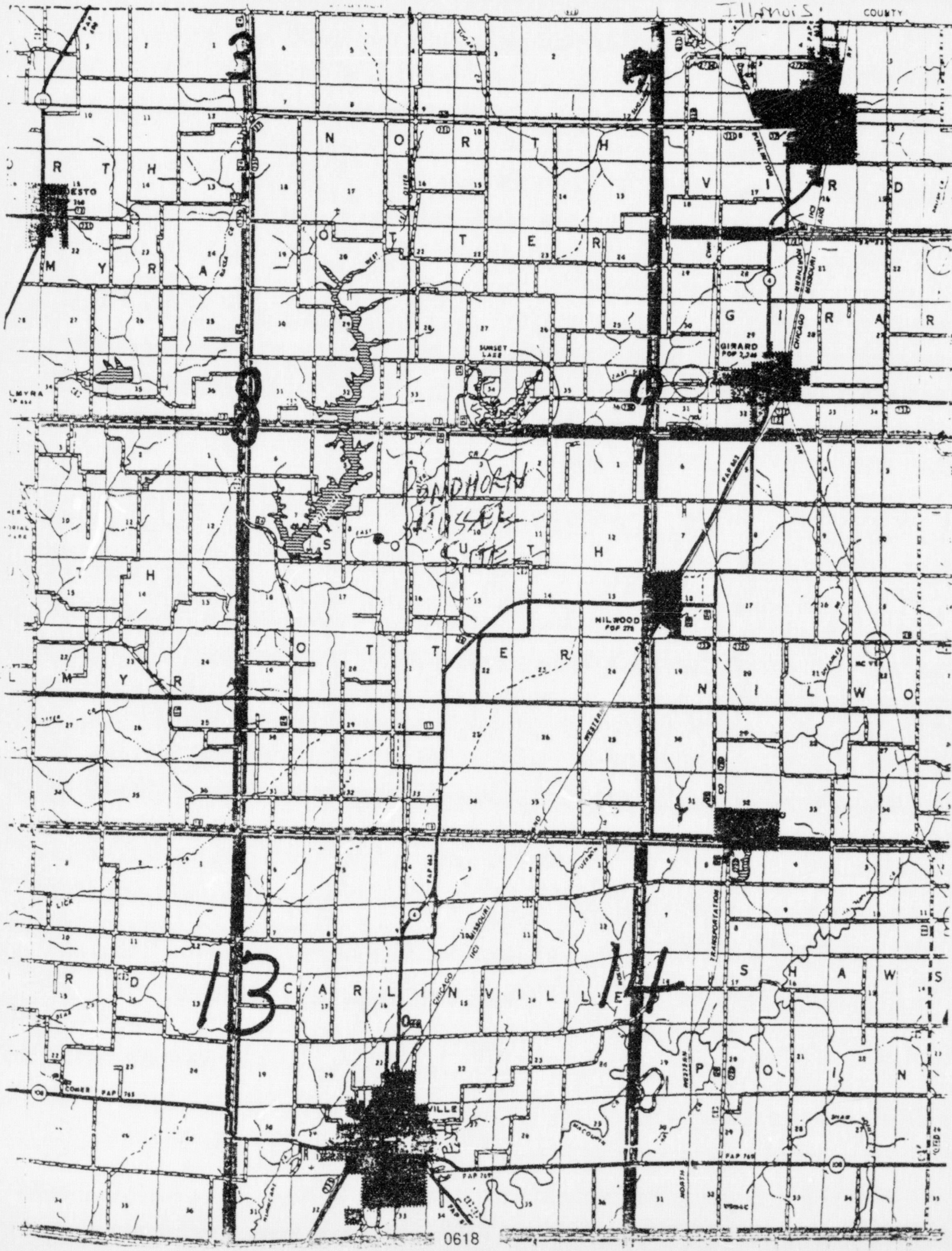
Sagittaria longirostra (Micheli) J. G. Sm.

ARROWHEAD — **ALISMATACEAE**



Status: Endangered in Illinois.
Synonymy: *Sagittaria engelmanniana* J. G. Sm. subsp. *longirostra* (Micheli) Bogin; *Sagittaria australis* (J. G. Sm.) Small
Habit: Stoloniferous perennial herb, 30-90 cm high.
Range: Southeastern United States, extending north to southern Illinois.

Sagittaria longirostra reaches its northwestern range limit in wooded seeps in extreme southern Illinois. It was first discovered in the state in 1967 and is now known from two stations, both in the Cretaceous Hills Section of the Coastal Plain Natural Division. These populations are within the Shawnee National Forest.
Reference: Bogin (1955).



Illinois
COUNTY
N O R T H
O T T E R
V I R D E
G I R A R
GIRARD
SUNSET LAKE
S O U T H
O T T E R
M Y R A
N I L W O
NILWOOD
C A R L I N V I L L E
S H A W S
P O I N
13
14
CHICAGO
NORTH TRANSPORTATION

Illinois

Illinois Department of Conservation
LINCOLN TOWER PLAZA • 524 SOUTH SECOND STREET • SPRINGFIELD 62701-1787 CHICAGO OFFICE • ROOM 4-300 • 100 WEST RANDOLPH • CHICAGO 60601
Brent Manning, Director John W. Comerio, Deputy Director Bruce F. Clay, Assistant Director

October 12, 1995

Ms. Julie Donsky, Environmental Scientist
Dames & Moore
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

RE: Endangered and Threatened Species Consultation Process
Environmental Report - ICC Submittal
Union Pacific and Southern Pacific Railroads Merger
IDNR Project: #21189

Dear Ms. Donsky:

Thank you for sending the above referenced project to this office for review of the presence of endangered or threatened species, Illinois Nature Preserves, and/or Illinois Natural Area Inventory (INAI) sites. The Illinois Natural Heritage Database was examined and there are several known occurrences associated with portions of this railroad project.

I. DeCamp to Edwardsville - Edwardsville to Madison:

The first area of concern is classified as the Eagle Park Marsh INAI site. This Illinois listed natural area inventory site is depicted on the Granite City, Illinois quadrangle map and exists in portions of the following topographic map sections - T:3N, R:9W, S:31, also T:3N, R:10W, S:36 and last, T:2N, R:10W, S:1, immediately south/southeast of the town of Venice, Illinois in Madison County. Additionally, the Eagle Park Marsh INAI site is part of the Horseshoe Lake complex located approximately 500 to 1000 feet east of the railroad tracks under investigation. State listed avian species recorded within this INAI site include: yellow-headed blackbird (Xanthocephalus xanthocephalus), which is classified as State endangered; common moorhen (Gallinula chloropus), which is classified as State threatened; and the pied-billed grebe (Podilymbus podiceps), which is also classified as State threatened.

The second natural resource of concern is a confirmed record of the State listed threatened avian species commonly known as the common moorhen (Gallinula chloropus)within topographic map Section 11, Township 3 north, Range 9 west, immediately southwest of the town of Stallings, Illinois in Madison County. This occurrence is depicted on the Monks Mound quadrangle map and is located approximately 1000 feet south of the railroad tracks in question.

Illinois

II. Barr to Girard:

The only recorded natural resource of concern currently within the Division's files is a confirmed record of the State listed threatened avian species commonly known as the loggerhead shrike (Lanius ludovicianus) within topographic map Sections 33 and 34, Townships 14 north and 15 north, Range 6 west, immediately north of Lick Creek in Sangamon County, Illinois. This occurrence is depicted on the Loami quadrangle map and is located approximately 1 mile west of the subject railroad tracks.

Because this is an information request, further consultation is not required at this time. However, as authorized by Section 11(a) of the Illinois Endangered Species Protection Act (Ill. Rev. Stat. 1989, ch. 8, par. 341), a proposed land-altering action shall not commence until the completion of the consultation process. This includes any form of construction, land management, or other activity authorized, funded, or performed by a State agency or local unit of government that will result in a change to the existing environmental conditions and/or may have a direct or indirect adverse impact on a listed species or its essential habitat or that otherwise jeopardizes the survival of that species. It is hoped that the environmental information contained in this letter will be used by the appropriate parties during any subsequent planning and construction phases. If construction efforts will be occurring in the specific regions described in this correspondence, it will be necessary to continue the consultation process so that an accurate assessment of potential biological impacts to the listed resources present can be made.

Please be aware that the Illinois Natural Heritage Database cannot provide a conclusive statement on the presence, absence, or condition of significant natural features in any part of Illinois. The reports only summarize the existing information regarding the natural features or locations in question known to the Division of Natural Heritage at the time of the request. The reports should never be regarded as final statements on the subject site being considered, nor should they be a substitute for field surveys required for environmental assessments.

If you have any questions or concerns about the above information, please do not hesitate to contact me at (217)785-5500. Thank you for your assistance in this matter.

Sincerely,

Joseph A. Kath
Project Manager
Endangered and Threatened Species Protection Program

Illinois

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Rock Island Field Office (ES)
4469 - 48th Avenue Court
Rock Island, Illinois 61201

COM: 309/793-5800
FAX: 309/793-5804

IN REPLY REFER TO

October 3, 1995

Ms. Julie Donsky
Environmental Scientist
Dames and Moore
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

This responds to your letter of September 22, 1995, requesting information for an Environmental Report pertaining to the proposed merger of Union Pacific and Southern Pacific Railroads. At this time your request concerns abandonments within Menard, Sangamon, Macoupin, and Madison Counties of Illinois.

To facilitate compliance with Section 7(c) of the Endangered Species Act of 1973, as amended, Federal agencies are required to obtain from the Fish and Wildlife Service information concerning any species, listed or proposed to be listed, which may be present in the area of a proposed action. Therefore, we are furnishing you the following list of species which may be present in the concerned area:

Classification	Common Name (Scientific Name)	Habitat
Menard County		
Endangered	Indiana Bat *Myotis sodalis*	Caves, mines; small stream corridors with well developed riparian woods; upland forests
Threatened	Eastern prairie fringed orchid *Platanthera leucophaea*	Mesic to wet prairies
Threatened	Bald eagle (*Haliaeetus leucocephalus*)	Wintering

Ms. Julie Donsky

Classification	Common Name (Scientific Name)	Habitat
Macoupin County		
Endangered	Indiana Bat Myotis sodalis	Caves, mines; small stream corridors with well developed riparian woods; upland forests
Threatened	Eastern prairie fringed orchid Platanthera leucophaea	Mesic to wet prairies
Sangamon County		
Endangered	Indiana Bat Myotis sodalis	Caves, mines; small stream corridors with well developed riparian woods; upland forests
Threatened	Bald eagle (Haliaeetus leucocephalus)	Wintering
Madison County		
Endangered	Gray bat (Myotis grisescens)	Caves
Endangered	Indiana Bat Myotis sodalis	Caves, mines; small stream corridors with well developed riparian woods; upland forests
Threatened	Bald eagle (Haliaeetus leucocephalus)	Wintering
Endangered	Least tern (Sterna antillaurm)	Bare alluvial and dredged spoil islands
Endangered	Pallid sturgeon (Scaphirynchus albus)	Rivers
Threatened	Decurrent false aster (Boltonia decurrens)	Disturbed alluvial soils

ILLINOIS

Ms. Julie Donsky

Classification	Common Name (Scientific Name)	Habitat
Threatened	Eastern prairie fringed orchid *Platanthera leucophaea*	Mesic to wet prairies

The Pallid sturgeon is not likely to be found within the project area.

The gray bat (*Myotis grisescens*) is listed as endangered and considered to potentially occur in Madison County, Illinois. It inhabits caves both summer and winter. A search for this species should be made prior to any cave-impacting activities. No Federal parks or reserves are located with the areas of the proposed projects.

The endangered Indiana bat (*Myotis sodalis*) is listed as occurring in Macoupin Counties in Illinois and could potentially occur throughout the state.

During the summer, the Indiana bat frequents the corridors of small streams with well developed riparian woods as well as mature upland forests. It forages for insects along the stream corridor, within the canopy of floodplain and upland forests, over clearings with early successional vegetation (old fields), along the borders of croplands, along wooded fencerows, and over farm ponds and in pastures. It has been shown that the foraging range for the bats varies by season, age and sex and ranges up to 81 acres (33ha). It roosts and rears its young beneath the loose bark of large dead or dying trees. It winters in caves and abandoned mines.

An Indiana bat maternity colony typically consists of a primary roost tree and several alternate roost trees. The use of a particular tree appears to be influenced by weather conditions (temperature and precipitation). For example, dead trees found in more open situations were utilized more often during cooler or drier days while interior live and dead trees were selected during period of high temperature and/or precipitation. It has been shown that pregnant and neonatal bats do not thermoregulate well and the selection of the roost tree with the appropriate microclimate may be a matter of their survival. The primary roost tree, however, appears to be utilized on all days and during all weather conditions by at least some bats. Indiana bats tend to be philopatric, i.e. they return to the same roosting area year after year.

Illinois

Suitable summer habitat in Illinois is considered to have the following characteristics within a 1/2 mile radius of the project site:

1) forest cover of 15% or greater;
2) permanent water;
3) one or more of the following tree species 11 inches diameter at breast height (dbh) or greater: shagbark and shellbark hickory that may be dead or alive, and dead bitternut hickory, American elm, slippery elm, eastern cottonwood, silver maple, white oak, red oak, post oak, and shingle oak with slabs or plates of loose bark;
4) at least 1 potential roost tree per 2.5 acres;
5) potential roost trees must have greater than 10% coverage of loose bark (by visual estimation of peeling bark on trunks and main limbs).

If the project site contains any habitat that fits the above description, it may be necessary to conduct a survey to determine whether the bat is present. If Indiana bats are known to be present, they must not be harmed, harassed or disturbed when present. For small tree clearing projects Indiana bat habitat may be altered (i.e trees cleared) only between the dates of September 1 and April 30.

The threatened bald eagle (Haliaeetus leucocephalus) is listed as wintering along large rivers, lakes and reservoirs in the following Illinois counties: Madison, Menard and Sangamon.

During the winter, this species feeds on fish in the open water areas created by dam tailwaters, the warm water effluents of power plants and municipal and industrial discharges, or in power plant cooling ponds. The more severe the winter, the greater the ice coverage and the more concentrated the eagles become. They roost at night in groups in large trees adjacent to the river in areas that are protected from the harsh winter elements. They perch in large shoreline trees to rest or feed on fish. There is no critical habitat designated for this species in Illinois and the only restrictions that apply to the eagle are that it not be harassed, harmed or disturbed when present.

The least tern (Sterna antillarum) is listed as endangered. Madison County is considered to be potential habitat. It nests on bare alluvial or dredged spoil islands and sand/gravel bars in or adjacent to rivers, lakes, gravel pits and cooling ponds. It nests in colonies with other least terns and sometimes with the piping plover. There is no critical habitat designated for this species. It must not be harmed, harassed or disturbed when present.

Illinois

Ms. Julie Donsky

5.

The eastern prairie fringed orchid (Platanthera leucophaea) is listed as threatened. It may potentially occur in Macoupin, Madison, and Menard Counties, Illinois based on historical records and habitat distribution. It occupies wet grassland habitats. There is no critical habitat designated for this species. Federal regulations prohibit any commercial activity involving this species or the destruction, malicious damage or removal of this species from Federal land or any other lands in knowing violation of State law or regulation, including State criminal trespass law. This species should be searched for whenever wet prairie remnants are encountered.

The decurrent false aster (Boltonia decurrens) is listed as threatened and known to occur in Madison County, Illinois (Illinois River floodplain). It is also considered to potentially occur in any county bordering the Illinois River and the counties bordering the Mississippi River between the mouths of the Missouri River and the Ohio River. It occupies disturbed alluvial soils in the floodplains of these rivers. There is no critical habitat listed for this species in Illinois.

Information regarding state protected species within the state of Illinois can be obtained from the Illinois Department of Natural Resources. They may also provide you with information regarding any state refuges or parks within the proximity of the proposed projects.

ATTN: Glen Kruse
Illinois Department of Natural Resources
Division of Natural Heritage
524 South 2nd. Street
Springfield, IL 62701-1787
(217)-785-8774

These comments provide technical assistance only and do not constitute the report of the Secretary of the Interior on the project within the meaning of Section 2(b) of the Fish and Wildlife Coordination Act, do not fulfill the requirements under Section 7 of the Endangered Species Act, nor do they represent the review comments of the U.S. Department of the Interior on any forthcoming environmental statement.

We appreciate the opportunity to comment on this project. If you have additional questions, please contact Scott Estergard of my staff.

Sincerely,

for Wayne A. Fischer
Richard C. Nelson
Field Supervisor

Illinois

TABLE 8

Madison County Threatened and Endangered Species

Common Name	Scientific Name	Status
PLANTS		
Large ground plum	*Astragalus crassicarpus*	SE
Decurrent false aster	*Boltonia decurrens*	ST, FT
Sweet indian plantain	*Cacalia suaveolens*	SWL
Hill's thistle	*Cirsium hillii*	ST
Whitlow grass	*Draba cuneifolia*	SE
Hoary mock orange	*Philadelphus pubescans*	SWL
Prairie white-fringed orchid	*Platanthera leucophaea*	SE, FT
Sour dock	*Rumex hastatulus*	SE
Royal catchfly	*Silene regia*	SE
Spring ladies' tresses	*Spiranthes vernalis*	SE
Prairie spiderwort	*Tradescantia bracteata*	SE
INVERTEBRATES		
Butterfly mussel	*Ellipsaria lineolata*	ST
Elephant-ear mussel	*Elliptio crassidens*	ST
Ebonyshell mussel	*Fusconaia ebena*	ST
Scaleshell mussel	*Leptodea leptodon*	SWL
Fat pocketbook mussel	*Potamilus capax*	SE, FE
Salamander mussel	*Simpsonaias ambigua*	SE
FISHES		
Lake sturgeon	*Acipenser fulvescens*	SE
Alligator gar	*Aractosteus spatula*	SWL
Gravel chub	*Erimystax x-punctatus*	SWL
Silvery minnow	*Hybognathus nuchalis*	SWL
Sturgeon chub	*Macrhybopsis gelida*	SE
Bigeye shiner	*Notropis boops*	SE
Flathead chub	*Platygobio gracilis*	SWL
Pallid sturgeon	*Scaphirhynchus albus*	SE, FE
AMPHIBIANS AND REPTILES		
Illinois chorus frog	*Pseudacris streckeri*	ST, C2
Timber rattlesnake	*Crotalus horridus*	ST
Great Plains rat snake	*Elaphe guttata emoryi*	ST
Eastern massasauga	*Sistrurus catenatus*	SE, C2
BIRDS		
Upland sandpiper	*Bartramia longicauda*	SE
Red-shouldered hawk	*Buteo lineatus*	SE
Great egret	*Casmerodius albus*	ST
Little blue heron	*Egretta caerulea*	SE
Snowy egret	*Egretta thula*	SE
Peregrine falcon	*Falco peregrinus*	SE, FE
Common moorhen	*Gallinula chloropus*	ST
Black-crowned night heron	*Nycticorax nycticorax*	SE
Pied-billed grebe	*Podilymbus podiceps*	ST
King rail	*Rallus elegans*	ST
Least tern	*Sterna antillarum*	SE, FE
Bewick's wren	*Thryomanes bewickii*	SE
Yellow-headed blackbird	*Xanthocephalus xanthocephalus*	SE
MAMMALS		
Gray bat	*Myotis grisescens*	SE, FE, KS
Indiana bat	*Myotis sodalis*	SE, FE, KS

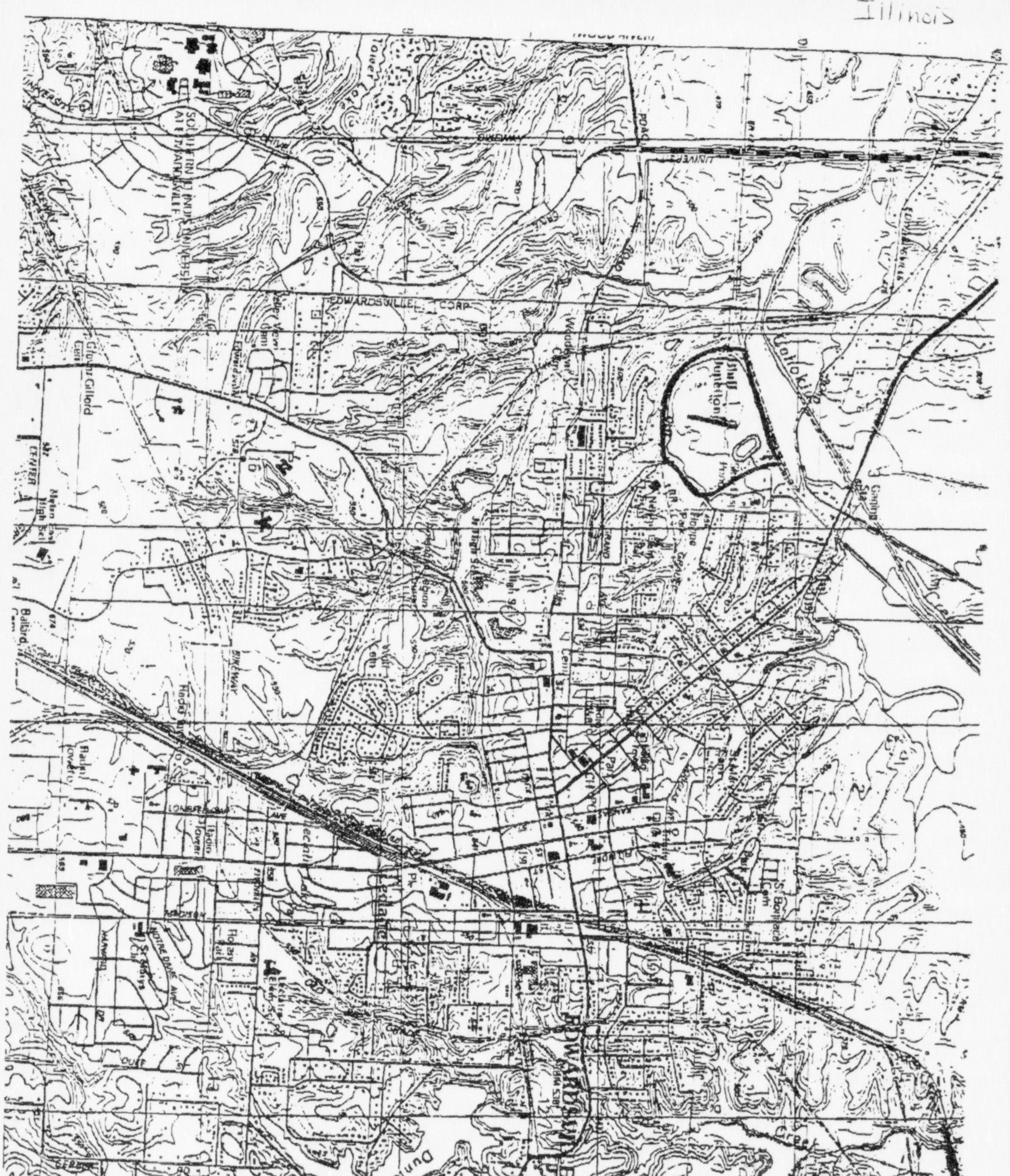
STATUS LEGEND AND DEFINITIONS:

SE - State endangered: any species which is in danger of extinction as a breeding species in Illinois.
ST - State threatened: any breeding species which is likely to become a state endangered species within the foreseeable future in Illinois.
SWL - State watch list: species for which there are questions about status which can not be answered currently available data.
FE - Federally endangered: any species which is in danger of extinction throught all or a significant portion of its range.
FT - Federally threatened: any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.
C2 - Candidate for federal listing.
KS - Karst sensitive.

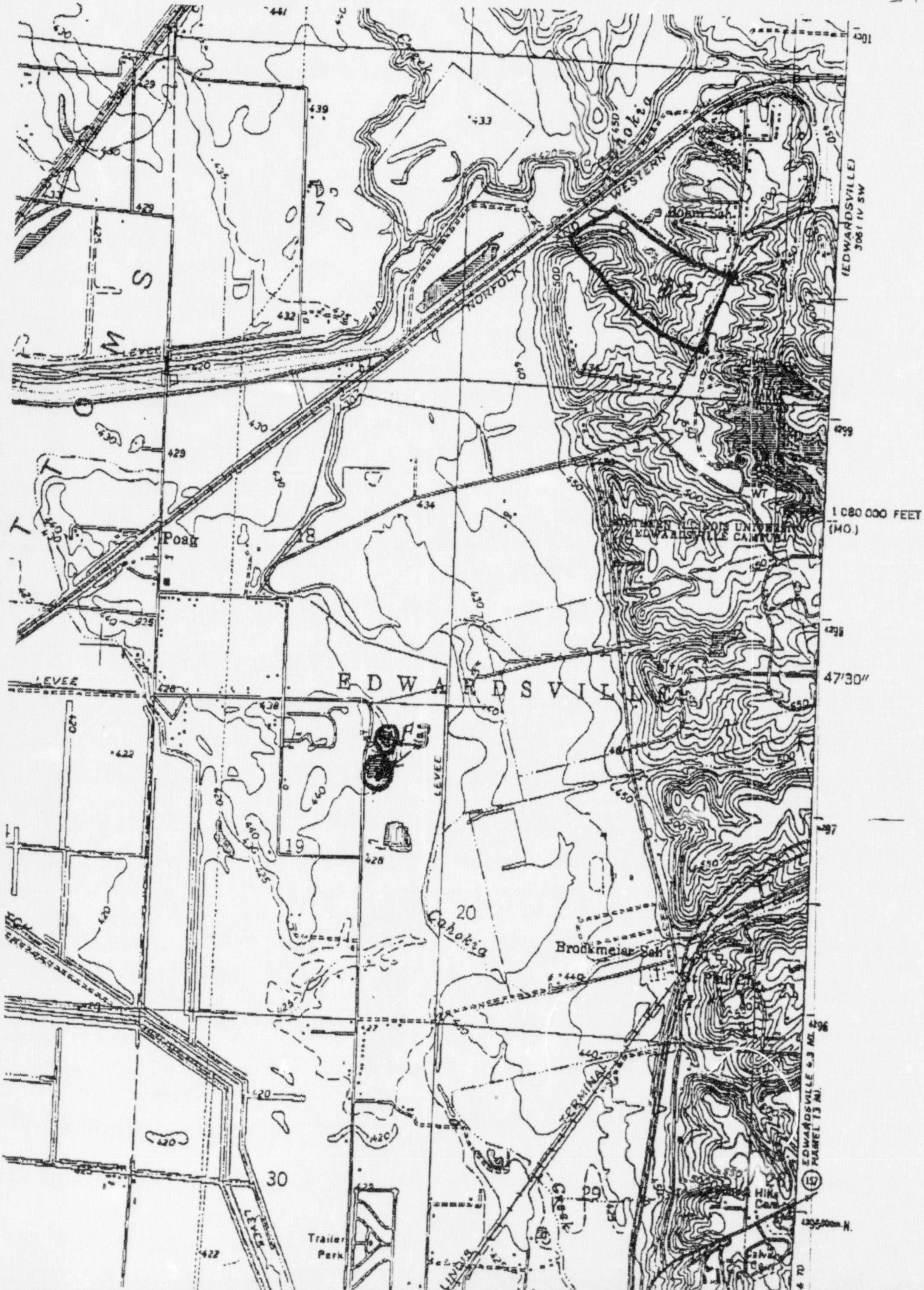
Note: This list is current only as of the date of it's preparation. It should not be used as an all inclusive list of sensitive species within the county, but only as an informational guide. Additional species may be added at any time without updating this list. Local units of government are required by law to engage in the the Illinois Department of Natural Resources Division of Natural Heritage endangered species consultation process prior to changes in land use.

This list was prepared on July 19, 1995 by Illinois Dept. of Natural Resources District 10 Natural Heritage Biologist Scott R. Ballard.

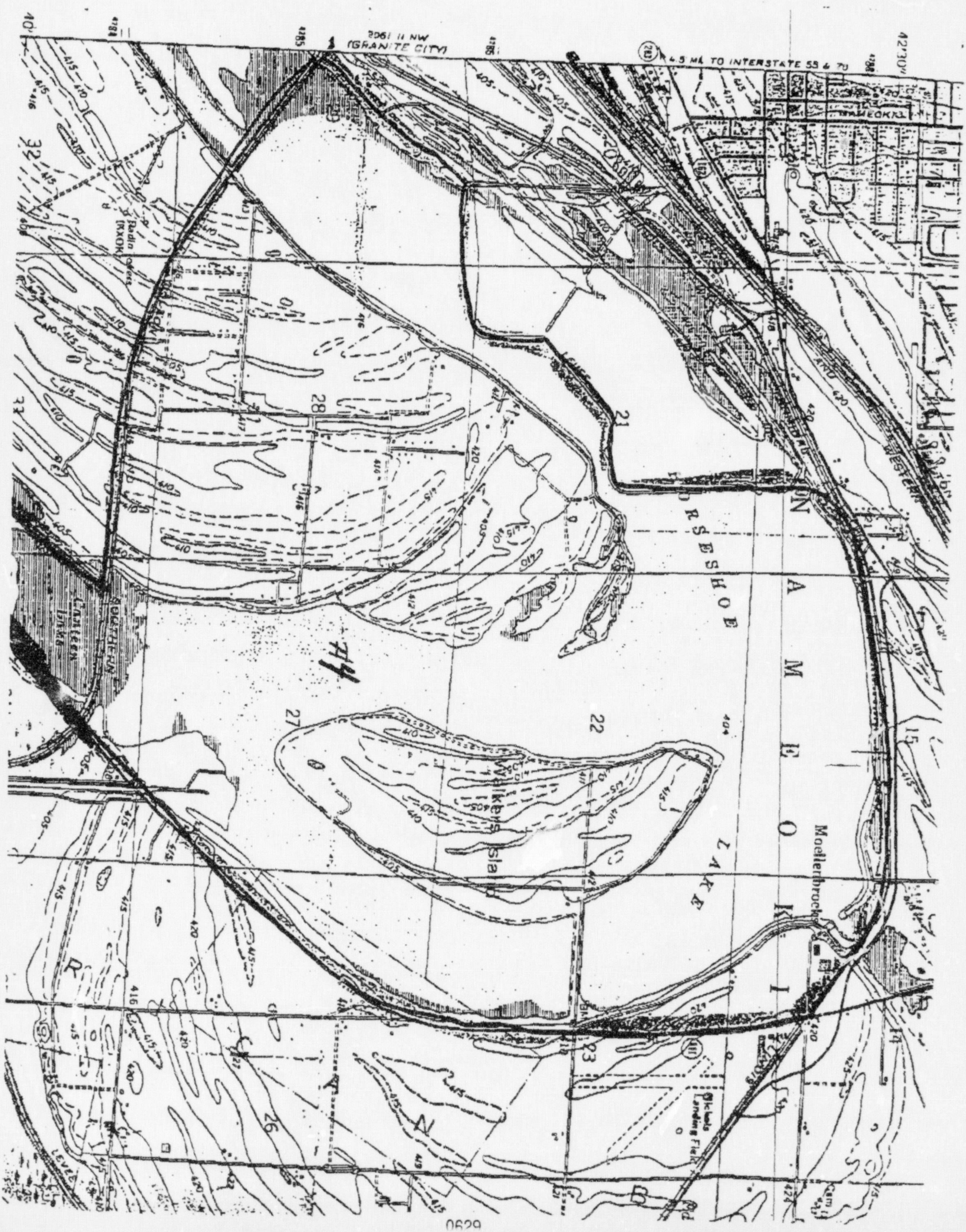
Illinois



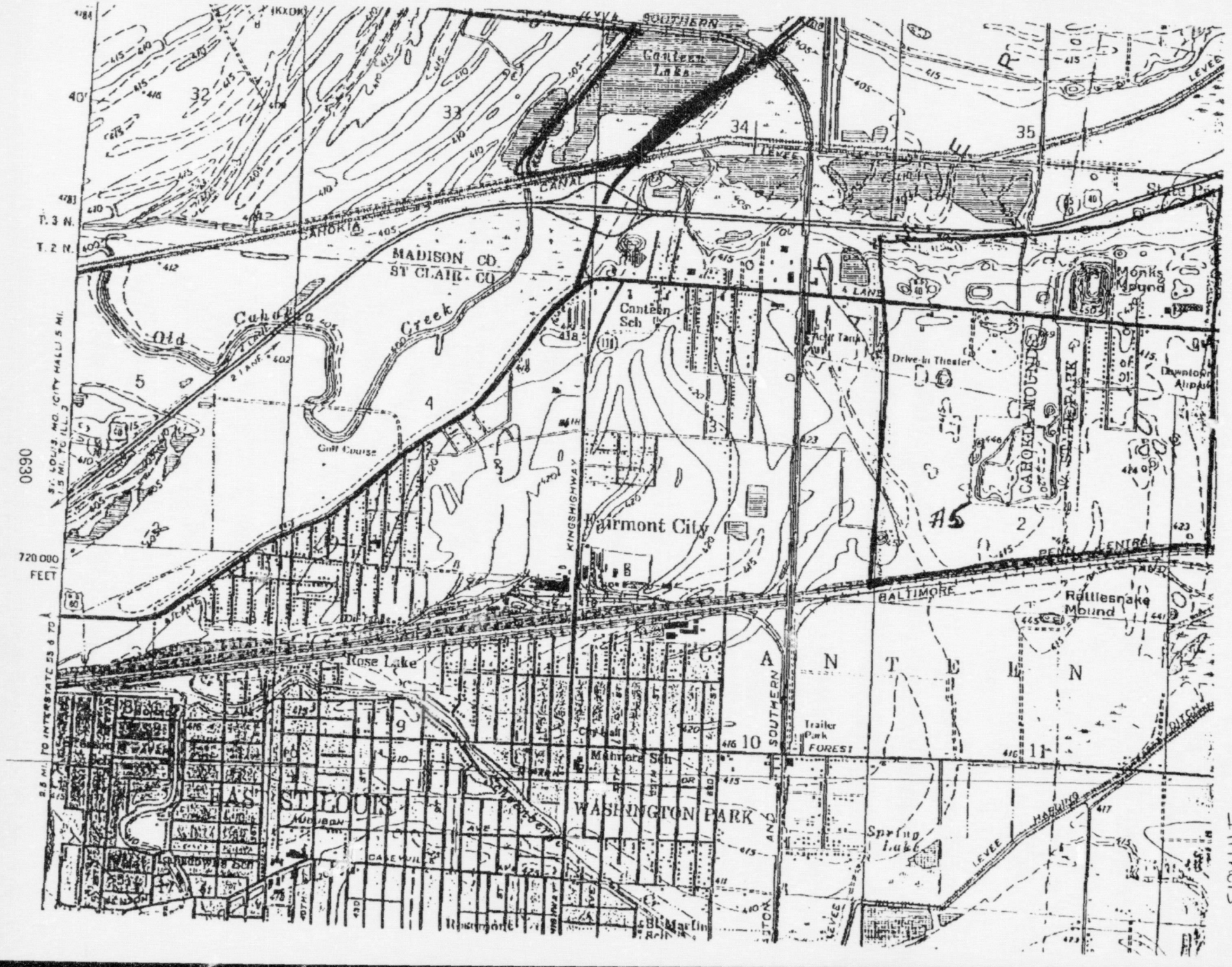
Illinois


EDWARDSVILLE
Cahokia
Creek
NORFOLK
WESTERN
LEVEE
Poag
Brockmeier Sch
Trailer
Park
TERMINAL
1 080 000 FEET
(MO.)
47'30"
(EDWARDSVILLE)
3061 IV SW
WT
18
19
20
29
30

Illinois



0629


SOUTHERN
Canteen Lake
CANAL
ANOKIA
MADISON CO.
ST CLAIR CO.
Old Cahokia Creek
Canteen Sch
Water Tank
Drive-In Theater
Monks Mound
CAHOKIA MOUNDS STATE PARK
Downtown Airport
Golf Course
KINGSHIGHWAY
Fairmont City
PENN CENTRAL
BALTIMORE
Rattlesnake Mound
Rose Lake
CANTELEN
Trailer Park
FOREST
Mahrers Sch
EAST ST LOUIS
WASHINGTON PARK
Spring Lake
LEVEE
DITCH
ILLINOIS
T. 3 N.
T. 2 N.
720 000 FEET
0630

Illinois

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Rock Island Field Office (ES)
4469 - 48th Avenue Court
Rock Island, Illinois 61201

COM: 309/793-5800
FAX: 309/793-5804

IN REPLY REFER TO:

October 23, 1995

Ms. Julie Donsky
Environmental Scientist
Dames and Moore
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

This responds to your letter of September 30, 1995, requesting information for an Environmental Report pertaining to the proposed merger of Union Pacific and Southern Pacific Railroads. Your request concerns construction within Macoupin, Marion, Sangamon, and St. Clair ~~Counties~~ of Illinois.

To facilitate compliance with Section 7(c) of the Endangered Species Act of 1973, as amended, Federal agencies are required to obtain from the Fish and Wildlife Service information concerning any species, listed or proposed to be listed, which may be present in the area of a proposed action. Therefore, we are furnishing you the following list of species which may be present in the concerned area:

Classification	Common Name (Scientific Name)	Habitat
Macoupin County		
Endangered	Indiana Bat *Myotis sodalis*	Caves, mines; small stream corridors with well developed riparian woods; upland forests
Threatened	Eastern prairie fringed orchid *Platanthera leucophaea*	Mesic to wet prairies

Marion County

Endangered	Indiana Bat Myotis sodalis	Caves, mines; small stream corridors with well developed riparian woods; upland forests

Sangamon County

Endangered	Indiana Bat Myotis sodalis	Caves, mines; small stream corridors with well developed riparian woods; upland forests
Threatened	Bald eagle (Haliaeetus leucocephalus)	Wintering

St. Clair County

Endangered	Indiana Bat Myotis sodalis	Caves, mines; small stream corridors with well developed riparian woods; upland forests
Threatened	Bald eagle (Haliaeetus leucocephalus)	Wintering
Endangered	Pallid sturgeon (Scaphirynchus albus)	Rivers
Threatened	Decurrent false aster (Boltonia decurrens)	Disturbed alluvial soils
Endangered	Running buffalo clover Trifolium stoloniferum	Disturbed bottomland meadows

The endangered Indiana bat (Myotis sodalis) is listed as Macoupin County in Illinois and could potentially occur throughout the state.

During the summer, the Indiana bat frequents the corridors of small streams with well developed riparian woods as well as mature upland forests. It forages for insects along the stream corridor, within the canopy of floodplain and upland forests,

Illinois

over clearings with early successional vegetation (old fields), along the borders of croplands, along wooded fencerows, and over farm ponds and in pastures. It has been shown that the foraging range for the bats varies by season, age and sex and ranges up to 81 acres (33ha). It roosts and rears its young beneath the loose bark of large dead or dying trees. It winters in caves and abandoned mines.

An Indiana bat maternity colony typically consists of a primary roost tree and several alternate roost trees. The use of a particular tree appears to be influenced by weather conditions (temperature and precipitation). For example, dead trees found in more open situations were utilized more often during cooler or drier days while interior live and dead trees were selected during period of high temperature and/or precipitation. It has been shown that pregnant and neonatal bats do not thermoregulate well and the selection of the roost tree with the appropriate microclimate may be a matter of their survival. The primary roost tree, however, appears to be utilized on all days and during all weather conditions by at least some bats. Indiana bats tend to be philopatric, i.e. they return to the same roosting area year after year.

Suitable summer habitat in Illinois is considered to have the following characteristics within a 1/2 mile radius of the project site:

1) forest cover of 15% or greater;
2) permanent water;
3) one or more of the following tree species 11 inches diameter at breast height (dbh) or greater: shagbark and shellbark hickory that may be dead or alive, and dead bitternut hickory, American elm, slippery elm, eastern cottonwood, silver maple, white oak, red oak, post oak, and shingle oak with slabs or plates of loose bark;
4) at least 1 potential roost tree per 2.5 acres;
5) potential roost trees must have greater than 10% coverage of loose bark (by visual estimation of peeling bark on trunks and main limbs).

If the project site contains any habitat that fits the above description, it may be necessary to conduct a survey to determine whether the bat is present. If Indiana bats are known to be present, they must not be harmed, harassed or disturbed when present. For small tree clearing projects Indiana bat habitat may be altered (i.e trees cleared) only between the dates of September 1 and April 30.

The threatened bald eagle (Haliaeetus leucocephalus) is listed as wintering along large rivers, lakes and reservoirs in the following Illinois counties: Sangamon and St. Clair.

Illinois

During the winter, this species feeds on fish in the open water areas created by dam tailwaters, the warm water effluents of power plants and municipal and industrial discharges, or in power plant cooling ponds. The more severe the winter, the greater the ice coverage and the more concentrated the eagles become. They roost at night in groups in large trees adjacent to the river in areas that are protected from the harsh winter elements. They perch in large shoreline trees to rest or feed on fish. There is no critical habitat designated for this species in Illinois and the only restrictions that apply to the eagle are that it not be harassed, harmed or disturbed when present.

The eastern prairie fringed orchid (Platanthera leucophaea) is listed as threatened. It may potentially occur in Macoupin County, Illinois based on historical records and habitat distribution. It occupies wet grassland habitats. There is no critical habitat designated for this species. Federal regulations prohibit any commercial activity involving this species or the destruction, malicious damage or removal of this species from Federal land or any other lands in knowing violation of State law or regulation, including State criminal trespass law. This species should be searched for whenever wet prairie remnants are encountered.

The decurrent false aster (Boltonia decurrens) is listed as threatened and known to occur in St. Clair County, Illinois (Mississippi River floodplain). It is also considered to potentially occur in any county bordering the Illinois River and the counties bordering the Mississippi River between the mouths of the Missouri River and the Ohio River. It occupies disturbed alluvial soils in the floodplains of these rivers. There is no critical habitat listed for this species in Illinois.

The running buffalo clover (Trifolium stoloniferum) is listed as endangered in Illinois. Although there are no currently known occurrences, it is considered to potentially occur in St. Clair County based on historical records. It occupies disturbed bottomland meadows. Federal regulations prohibit any commercial activity involving this species or the destruction, malicious damage or removal of this species from Federal land or any other lands in knowing violation of State law or regulation, including State criminal trespass law.

The pallid sturgeon is not likely to be found within the project area.

These comments provide technical assistance only and do not constitute the report of the Secretary of the Interior on the project within the meaning of Section 2(b) of the Fish and Wildlife Coordination Act, do not fulfill the requirements under

Illinois

Ms. Julie Donsky

5.

Section 7 of the Endangered Species Act, nor do they represent the review comments of the U.S. Department of the Interior on any forthcoming environmental statement.

We appreciate the opportunity to comment on this project. If you have additional questions, please contact Scott Estergard of my staff.

Sincerely,

Wayne A. Fischer

Richard C. Nelson
Field Supervisor

cc: MISO (Collins)

SE:am

RARE, THREATENED, AND ENDANGERED SPECIES IN THE AREA OF ABANDONMENTS AND/OR CONSTRUCTION SITES IN KANSAS

Common Name	Scientific Name	Status
Fluted shell	*Lasmigona costata*	S(T)
American burying beetle	*Necrophorus americanus*	F(E)
Speckled chub	*Macrhybopsis aestivalis tetranemus*	S(E)
Sturgeon chub	*Macrhybopsis gelida*	S(T)
Arkansas darter	*Etheostoma cragini*	S(T)
Arkansas river shiner	*Notropis girardi*	F(PE)
Topeka shiner	*Notropis topeka*	
Western green toad	*Bufo debilis insidior*	S(T)
New Mexico blind snake	*Leptotyphlops dulcis dissectus*	S(T)
Checkered garter snake	*Thamnophis marcianus*	S(T)
White-faced ibis	*Plegadis chihi*	F(C2)
Bald eagle	*Haliaeetus leucocephalus*	F(T)
Peregrine falcon	*Falco peregrinus*	F(E)
Whooping crane	*Grus americana*	F(E)
Snowy plover	*Charadrius alexandrinus*	S(T)
Piping plover	*Charadrius melodus*	F(T)
Mountain plover	*Charadrius montanus*	F(C1)
Eskimo curlew	*Numenius borealis*	F(E)
Least tern	*Sterna antillarum*	F(E)
Eastern spotted skunk	*Spilogale putorius*	S(T)
Black-footed ferret	*Mustela nigripes*	F(E)

F = Federal;
S = State;
(E) = Endangered;
(PE) = Proposed Endangered;
(T) = Threatened;
(C1) = Category 1 Candidate;
(C2) = Category 2 Candidate