



Minnesota State Zoological Board.  
Zoo-Related Organizations Files.

## **Copyright Notice:**

This material may be protected by copyright law (U.S. Code, Title 17). Researchers are liable for any infringement. For more information, visit [www.mnhs.org/copyright](http://www.mnhs.org/copyright).



# American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICE AT OGLEBAY PARK, WHEELING, WV 26003 - 1698  
(304) 242-2160; FAX: (304) 242-2283

5 July 1990

George Rabb, Ph.D., Director  
Chicago Zoological Park  
3300 Golf Road  
Brookfield, IL 60513

## OFFICERS

President  
CHARLES H. HOESSLE

President-Elect  
DAVID G. ZUCCONI

Vice President  
PAUL S. CHAFFEE, D.V.M.

Immediate Past President  
PALMER E. KRANTZ, III

Executive Director  
ROBERT O. WAGNER

## DIRECTORS

SUSAN M. ENGFER

STEVE H. TAYLOR

STEPHEN R. WYLIE

TED A. BEATTIE

DENNIS A. MERITT, JR., Ph.D.

CHRISTEN M. WEMMER, Ph.D.

CLAUDIA E. COLLIER

ROY A. SHEA

R. GREGORY TARRY

Dear George:

We appreciate the accreditation. The other members receiving a reassignment.

Enclosed are materials, inspection reports, and the institution's review of his assignments and the concerns of the institution.

The narrative report, as well as the accreditation review report form, should be typewritten. Also, the recommendation of the review team regarding its opinion for continuing accreditation should be included in a cover letter, not in the narrative report.

We will appreciate your contacting Kathryn regarding an agreeable inspection date and making the necessary arrangements with Bruce as soon as possible. Please advise the Executive Office of the date(s) of your inspection. Any questions you may have should be directed to Accreditation Commission Chairman Felton or me.

Warm regards,

AMERICAN ASSOCIATION OF  
ZOOLOGICAL PARKS AND AQUARIUMS

*RO*  
Robert O. Wagner  
Executive Director

ROW/jkw

Enclosures

Copies to: AAZPA Accreditation Commission  
Bruce Beehler, DVM, Director/Animal Management & Health  
Kathryn Roberts, Ph.D.

*A nonprofit, tax-exempt organization dedicated to the advancement of zoological parks and aquariums for conservation, education, scientific studies and recreation.*

*Thanks  
Ginny!*

*Jesse*

ment as chairman of the  
nesota Zoological Garden.  
DVM. By virtue of  
y Kathryn Roberts of your

onnaire, supporting mate-  
orm, as well as previous  
attachments and the insti-  
Bruce, thus informing him  
efully study the instruc-  
ay particular attention to  
ide in your narrative how

*8/27/90  
booked 2 rooms at Compie  
Sept 4-5 (late arrival on  
Sept 9-6 4th)  
Beehler, Bruce - 61544  
Rabb, George 61543*

*6/5/Act*

*Lead*



# American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICE AT OGLEBAY PARK, WHEELING, WV 26003 · 1698  
(304) 242-2160; FAX: (304) 242-2283

5 July 1990

George Rabb, Ph.D., Director  
Chicago Zoological Park  
3300 Golf Road  
Brookfield, IL 60513

## OFFICERS

President  
CHARLES H. HOESSLE

President-Elect  
DAVID G. ZUCCONI

Vice President  
PAUL S. CHAFFEE, D.V.M.

Immediate Past President  
PALMER E. KRANTZ, III

Executive Director  
ROBERT O. WAGNER

## DIRECTORS

SUSAN M. ENGFER

STEVE H. TAYLOR

STEPHEN R. WYLIE

TED A. BEATTIE

DENNIS A. MERITT, JR., Ph.D.

CHRISTEN M. WEMMER, Ph.D.

CLAUDIA E. COLLIER

ROY A. SHEA

R. GREGORY TARRY

Dear George:

We appreciate your acceptance of the assignment as chairman of the accreditation inspection review team for the Minnesota Zoological Garden. The other member of your team is Bruce Beehler, DVM. By virtue of receiving a copy of this letter, we are informing Kathryn Roberts of your assignment.

Enclosed is the institution's review questionnaire, supporting materials, inspection team instructions and report form, as well as previous inspection reports. A copy of this letter, its attachments and the institution's review questionnaire are being sent to Bruce, thus informing him of his assignment to serve with you. Please carefully study the instructions and the previous accreditation reports. Pay particular attention to the concerns expressed in those reports and include in your narrative how the institution has addressed those concerns.

The narrative report, as well as the accreditation review report form, should be typewritten. Also, the recommendation of the review team regarding its opinion for continuing accreditation should be included in a cover letter, not in the narrative report.

We will appreciate your contacting Kathryn regarding an agreeable inspection date and making the necessary arrangements with Bruce as soon as possible. Please advise the Executive Office of the date(s) of your inspection. Any questions you may have should be directed to Accreditation Commission Chairman Felton or me.

Warm regards,

AMERICAN ASSOCIATION OF  
ZOOLOGICAL PARKS AND AQUARIUMS

  
Robert O. Wagner  
Executive Director

ROW/jkw

Enclosures

Copies to: AAZPA Accreditation Commission  
Bruce Beehler, DVM, Director/Animal Management & Health  
Kathryn Roberts, Ph.D.

*A nonprofit, tax-exempt organization dedicated to the advancement of zoological parks and aquariums for conservation, education, scientific studies and recreation.*

*8/27/90  
booked 2 rooms at Compie  
Sept 4-5 (late arrival on 4th)  
depart 9-6  
Beehler, Bruce - 61544  
Rabb, George - 61543  
#65/Act*

*Lead*

# Compri Hotels

BY DOUBLETREE

May 20, 1988

Ginny Bender  
MINNESOTA ZOO BOARD  
Apple Valley, Minnesota 55124

Dear Ms. Bender:

Thank you for taking the time to speak with me about the Compri Hotel Minneapolis/St. Paul, International Airport.

Enclosed, please find a packet of information which will be helpful in answering any questions you may have concerning the Hotel.

Your guests may take advantage of the following amenities during their stay at no additional cost:

- \* FOUR-STAR LUXURY GUEST ROOMS
- \* TWO HOUR EVENING COCKTAIL RECEPTION SERVING PREMIUM LIQUOR AND HORS D'OEUVRES
- \* LATE NIGHT SNACKS
- \* FRESH COOKED-TO-ORDER BREAKFAST
- \* THE EXCLUSIVE COMPRI CLUB, FEATURING WIDE SCREEN T.V., COMFORTABLE LIBRARY WITH CURRENT PERIODICALS, THE SANCTUARY, OUR STATE-OF-THE-ART BOARD ROOM, IS AVAILABLE ON A COMPLIMENTARY BASIS
- \* COMPLETE EXERCISE FACILITIES
- \* SWIMMING POOL, WHIRLPOOL, SAUNA
- \* REMOTE CONTROL TELEVISION IN EACH ROOM WITH PREMIUM VIEWING STATIONS FEATURING HBO, CNN, ESPN
- \* TWO PHONES IN EACH ROOM WITH 2 INCOMING LINES
- \* SPACIOUS DESKS IN EACH GUEST ROOM
- \* SHUTTLE SERVICE TO AND FROM THE MINNEAPOLIS/ST. PAUL INTERNATIONAL AIRPORT

*(Call from telephone at the airport near baggage claim area)*

Ms. Bender, I am confident you will be quite pleased with our facilities. If you have any questions or comments, please feel free to contact me.

Sincerely,  
COMPRI HOTEL

*Kathleen Thiel*

Kathleen Thielen  
Sales Manager

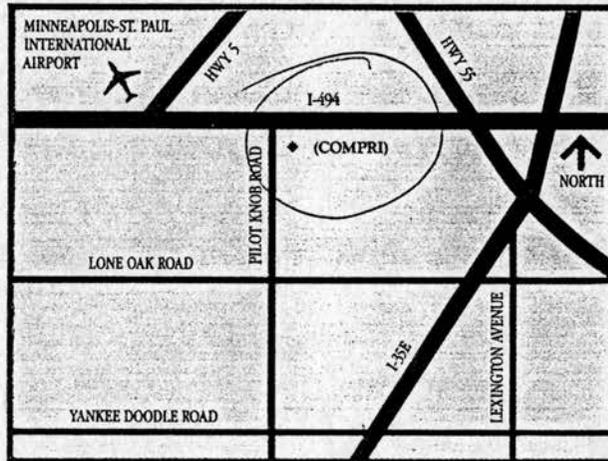
/enclosure  
KAT/smh

*your for map*

*bs/m/kt  
1  
11*

# (Compri) Hotel

E A G A N



## Compri Hotel Eagan

2700 Pilot Knob Road  
Eagan, MN 55121  
(612) 454-3434

Located 5 miles east of the Minneapolis/St. Paul International Airport. Travel eastbound on I-494 and exit on Pilot Knob Road. Hotel is within easy access to Unisys, Control Data, Gray Research, 3M Company, Northwest Airline Headquarters, West Publishing and Blue Cross/Blue Shield. Also convenient to excellent shopping and regional attractions including Canterbury Downs Race Track, Valleyfair Amusement Park and the Mets Sports Center. Downtown St. Paul 10 minutes. Downtown Minneapolis 15 minutes. 190 rooms.

*Other Compri Hotels are located in Alexandria, VA • Atlanta, GA  
Boise, ID • El Segundo (Los Angeles Airport), CA • Gaithersburg, MD  
Harrisburg, PA • Lakewood (West Denver), CO • Newport/Santa  
Ana, CA • Ontario, CA • Pleasanton, CA • Rancho Bernardo (San  
Diego), CA • Schaumburg, IL*

*Coming soon to Boston, MA • Chandler, AZ • Charlotte, NC • Chicago,  
IL • Covina (Los Angeles), CA • Crystal City (Washington, D.C.) • Detroit  
(Southfield), MI • Eden Prairie (Minneapolis), MN • Grand Rapids,  
MI • Livonia (Detroit), MI • Milwaukee, WI • Orlando (Buena Vista),  
FL • N.E. Philadelphia (Ben Salem), PA • Phoenix, AZ • Princeton, NJ  
San Antonio, TX • San Pedro (Los Angeles), CA • St. Louis, MO  
Yorba Linda (Los Angeles), CA*

For reservations, contact your travel agent or call our  
800 number. Ask about our special weekend packages, too.

## 1-800-4-COMPRI

APOLLO • DATAS II • PARS • SABRE • SystemOne: CO

BY DOUBLETREE

# MINNESOTA ZOO

Strengthening The Bond Between People and The Living Earth.

Minnesota Zoo • Apple Valley, Minnesota • 55124 • 612/431-9200

August 27, 1990

George Rabb, Ph.D., Director  
Chicago Zoological Park  
3300 Golf Road  
Brookfield, Ill 60513

Dear Dr. Rabb:

After speaking with Lea, I have made hotel reservations for you during our AAZPA reaccreditation inspection on September 5. I booked you in at the Compri hotel for late arrival on September 4 and departure on September 6 (Confirmation #61543). The Compri offers a shuttle service, available by phoning them from a telephone at the airport near the baggage claim area. I've enclosed a map of the zoo along with a description of the facilities available at the Compri.

If you will call Kathryn (612/431-9333) when you return from Copenhagen, we can arrange for transportation to the Zoo on Wednesday, September 5th, if you choose not to rent a car.

Either you or Lea can call me at 612/431-9299 if there is any other way I can help.

Sincerely,



Ginny Bender  
Secretary to Kathryn Roberts

gb

Enc.



# MINNESOTA ZOO

Strengthening The Bond Between People and The Living Earth.

Minnesota Zoo • Apple Valley, Minnesota • 55124 • 612/431-9200

August 27, 1990

Bruce Beehler, DVM  
Assistant Director/Animal Management & Health  
Milwaukee Zoo  
10001 West Bluemound Rd.  
Milwaukee, WI 53226

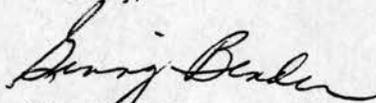
Dear Dr. Beehler:

I have made hotel reservations for you during our AAZPA reaccreditation inspection on September 5. I booked you in at the Compri hotel for late arrival on September 4 and departure on September 6 (Confirmation #61544). The Compri offers a shuttle service, available by phoning them from a telephone at the airport near the baggage claim area. I've enclosed a map of the zoo along with a description of the facilities available at the Compri.

Dr. Rabb will call Kathryn or I will call him on Tuesday morning, September 4, to see what time you want to start inspecting on Wednesday.

You can call me at 612/431-9299 if there is any other way I can help.

Sincerely,



Ginny Bender  
Secretary to Kathryn Roberts

gb

Enc.





# American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICE AT OGLEBAY PARK, WHEELING, WV 26003 (304) 242-2160

CONFIDENTIAL

cc: Division Directors 9/1  
MZ Bd  
MZS  
MZCF  
PR  
K

24 September 1980

Mr. Edward Kohn, General Director  
Minnesota Zoological Garden  
12101 Johnny Cake Ridge Road  
Apple Valley, MN 55124

Dear Ed:

We are pleased to enclose two different-sized AAZPA logos for use on your institution's letterhead.

The Board of Directors has unanimously approved the use of the Association's logo on the letterhead of AAZPA Accredited institutional members. For your information, most institutions are incorporating the words, AAZPA ACCREDITED INSTITUTION or ACCREDITED BY THE AMERICAN ASSOCIATION OF ZOOLOGICAL PARKS AND AQUARIUMS.

We are also enclosing copies of the Visiting Committee report form and the narrative report compiled by those professional colleagues who visited your institution. You will see that the reports are quite extensive and adequately express the high regard that your colleagues hold for the operation of the Minnesota Zoological Garden. However, you will also note that there are a few areas of concern pointed out by the Visiting Committee which the Commission draws to your attention. Please know that the Association's Accreditation program includes a reevaluation within approximately five years of your being notified of Accreditation. The person making the follow-up inspection will be given copies of the Visiting Committee report form and narrative report to guide them in their endeavors.

On behalf of the AAZPA Board of Directors, I offer you, your fine staff and your governing authority my congratulations upon the Minnesota Zoological Garden becoming an Accredited institution. Please display your certificates and use the logo with pride; your institution has earned the privilege.

Warm personal regards,

Robert O. Wagner  
Executive Director

ROW/br

Copies to: Daniel H. Moreno  
Paul S. Chaffee, D.V.M.  
Clayton Freiheit

#### OFFICERS

President  
PAUL S. CHAFFEE, D.V.M.  
Director  
Roeding Park Zoo

President-Elect  
LOUIS R. DISABATO  
Director  
San Antonio Zoological  
Gardens and Aquarium

Vice-President  
PETER KARSTEN  
Director  
Calgary Zoo

Immediate Past President  
DON D. FARST, D.V.M.  
Director  
Gladys Porter Zoo

Executive Director  
ROBERT O. WAGNER  
Oglebay Park  
Wheeling, WV

#### DIRECTORS

CHARLES L. BIELER  
Executive Director  
Zoological Society of San Diego

WILLIAM G. CONWAY  
General Director  
New York Zoological Park

DAVID G. ZUCCONI  
Superintendent  
Tulsa Zoological Park

LOUIS E. GARIBALDI  
Curator  
New England Aquarium

PALMER E. KRANTZ, III  
Director  
Riverbanks Zoological Park

ELVIE TURNER, JR.  
Director  
Fort Worth Zoological Park

GEORGE R. FELTON, JR.  
Director  
Greater Baton Rouge Zoo

GERALD S. LENTZ  
Manager/Zoological Operations  
Busch Gardens - Tampa

WARREN D. THOMAS, D.V.M.  
Director  
Los Angeles Zoo



12101 Johnny Cake Ridge Road  
Apple Valley, MN 55124  
612/432-9010

October 2, 1980

TO: MINNESOTA ZOOLOGICAL BOARD MEMBERS  
FROM: Jim Hetland, Chairman  
RE: ACCREDITATION

I am sure you will be as pleased as I am over our receiving full accreditation by the American Association of Zoological Parks and Aquaria.

I am told that seldom has a review been so positive.

Enclosed for your information is a copy of the report.

JH:gd

Attachment

# Denver Zoo

CITY PARK  
DENVER, COLO. 80205  
PHONE: (303) 575-2432

25 August, 1980

Daniel Moreno, Chairman  
AAZPA Accreditation Commission  
The Cleveland Aquarium  
601 East 72nd Street  
Cleveland, Ohio 44103

Dear Chairman Moreno:

A visitation and on-site inspection for purposes of AAZPA accreditation was conducted by Clayton Freiheit, Gil Boese and Dennis Meritt at the Minnesota Zoological Garden on 15 and 16 August 1980.

Interviews and discussions were conducted with the following: General Director Edward Kohn, Executive Officer Ralph Waterhouse, Associate Director for Biological Programs Brad House, Associate Director for Visitor Programs Beverly Rongren, Dr. Kent Kane, Veterinarian and Curators Nick Reindl, John Lewis, Ron Johnson, Sandy Friedman and Austin McDevitt. All were extremely cooperative and informative.

The committee was unable to interview the Chairman of the Minnesota Zoological Board, James Hetland, due to his absence from the city.

The Zoo's governing body is the Minnesota Zoological Board which contains 11 members appointed by the Governor for 4-year terms and a twelfth member (non-voting) who represents Dakota County. The Minnesota Zoological Board has primary responsibility for operations and management of the Minnesota Zoological Gardens. Additionally, there exists the Minnesota Zoological Society and the Minnesota Zoological Garden Foundation as separate entities. The Society provides the standard membership organization with typical support programs and volunteer services. The Zoo receives no direct share of Society generated funds but may apply for grants (\$98,000.00 in 1979) to be funded by the Society. The Minnesota Zoological Garden



## staff

Clayton F. Freiheit  
*Zoo Director*  
Paul N. Linger  
*Assistant Director*  
Edward C. Schmitt  
*Curator*  
William R. Turner  
*Education*  
Richard C. Cambre, D.V.M.  
*Veterinarian*

## officers

William H. Kistler  
*President*  
Dr. Conrad Hiley  
*Vice President*  
W. W. Robinson  
*Vice President*  
Mrs. Walter Koelbel  
*Vice President*  
Loren A. Vance  
*Treasurer*  
Horace F. Phelps  
*Secretary*

## honorary life trustee

Harman F. Fausch

## trustees

Kenneth R. Bunn  
Joe Ciancio, Jr.  
William C. Dalney, Jr.  
Robert P. Davison  
Dr. William T. Driscoll  
John Ferguson III  
Mrs. F. Wallace Gage  
Mrs. Edwin Grant  
Willard N. Greim  
Stephen Grogan  
John M. Gurtler  
Mrs. Louis Halsell  
Mrs. Donna M. Hamilton  
Ferris Hamilton  
Sidney G. Hoskins  
William W. Hubbell  
Fred G. Jager  
Mrs. Thomas Keesting  
Dr. Richard P. Koeppe  
James B. Kurtz  
Mrs. John Love  
Mrs. Forrest McGrath  
Robert B. Moch  
Aksel Nielsen  
J. Churchill Owen  
Dr. Robert Sawyer  
John L. Scripps  
Dr. William R. Smith  
Mrs. Karla Sorensen  
James E. Stokes  
Charles L. Warren  
Dr. Joseph L. Yrisarri, Jr.



ACCREDITED INSTITUTIONAL MEMBER  
OF THE AMERICAN ASSOCIATION OF  
ZOOLOGICAL PARKS AND AQUARIUMS

AUG 28 1980

Foundation was separately incorporated to serve as a capital fund raising organization for the Zoo. They successfully accomplished the raising of \$2.3 million in matching funds from private sources and have also provided approximately \$800,000.00 in direct gifts to the Minnesota Zoo. A publication entitled "The Minnesota Zoo - An Alliance" describes the relationship of the 3 organizations and is appended as Exhibit A.

There are currently 165 permanent positions and 120 part-time employees (exclusive of Dairy Queen concession employees) which comprise the staff of the Minnesota Zoological Garden. Ed Kohn, General Director, is the Zoo's chief executive officer. He is well-qualified to head this large organization having previously been Deputy Director of the National Zoological Park. In addition to providing capable direction and administration Ed Kohn also offers high-principled, sensitive leadership for the Zoo. Attached, Exhibit B, are the Director's selected goals for the facility. The other members of the Zoo's management team demonstrated high levels of training, competence and enthusiasm for their tasks. All are professional and congenial and appear to function well together. The teamwork approach was emphasized on several occasions by Director Kohn and seems to be an important aspect of this new institution's direction. The committee was very favorably impressed with the staff of Minnesota Zoological Garden.

The overall impression of the facility, its exhibits and the collections therein contained is very favorable. It is most certainly one of the mainstream zoological institutions in the U. S. and a great credit to the AZPA as a member. The physical plant is perhaps best described as awesome due to the nature of the design concepts and their execution, available funding and the potential of the site. Due to the themes of the Zoo's exhibits the collection is somewhat limited, however, a satisfying visitor experience has resulted. All public facilities were clean and orderly. Exhibits are tastefully and professionally accomplished and many demonstrate considerable ingenuity. The Minnesota Trail section features native animals and is probably the finest exhibit sequence of its type anywhere. Rotation of individual specimens is done to insure animal activity. The Beaver exhibit is particularly well conceived and executed. The committee's only criticism of exhibits centered on the nocturnal animal section of the Tropics Trail wherein we personally found it quite difficult to orientate ourselves after entering the area from the brightly illuminated diurnal exhibits. A second walk through the exhibit on the following day (when it was raining and light levels were much lower) did not present a repeat of this problem.

Off-exhibit animal holding areas are, in general, spacious, clean and well organized. The committee did note, however, that a number of service areas in the main building complex were cluttered and disorganized. There is an apparent lack of general storage space in the building and the staff has been forced to utilize almost every available nook and cranny. Both Ed Kohn and Ralph Waterhouse acknowledged this as a problem but also felt the situation could be improved greatly by assigning a staff member to be responsible for checking such areas. A similar criticism was noted in some areas of the Zoo's hospital.

The Minnesota Zoological Garden is heavily program oriented. There is a very strong commitment to interpretive education which is supported by both the professional staff and volunteer corps. Extensive use of video tape is made throughout the Zoo for both public information and animal management. The committee was able to experience and observe many of the Zoo's programs and activities during the course of its visit. Shows in the theater were viewed, Zoo Lab was observed and the new bird demonstrations were seen. We also observed the volunteers presenting animal demonstrations in the so-called Education Pit. Graphics abound in the Zoo and appear to be effective. All of the programs which were observed gave the impression of being informative, professional and much appreciated by the Zoo's audience.

Appended to this report are the following additional exhibits;

Exhibit C - Minnesota Zoo, 1980-1981  
Goals and Objectives

Exhibit D - Minnesota Zoo Guide

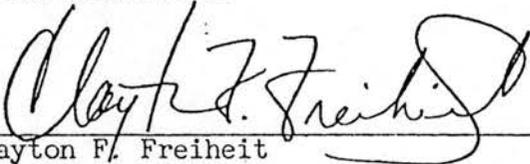
Exhibit E - Minnesota Zoo Guide (color)

Exhibit F - Monorail Brochure

Exhibit G - Financial Report (10 July 1980)

In conclusion, the committee was very favorably impressed with the Minnesota Zoological Garden. It is a handsome facility which exhibits its collections meaningfully and interprets them effectively to its audience. The programs are outstanding and demonstrate considerable thought and innovation. Our criticisms are very minor and readily correctable. In our judgement, the Minnesota Zoological Garden is accreditable and we offer this recommendation for consideration by the AAZPA Accreditation Commission.

By

  
\_\_\_\_\_  
Clayton F. Freiheit

Chairman of Visiting Inspection Team

Attachments (8)



# American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICE AT OGLEBAY PARK, WHEELING, WV 26003 · 1698 (304) 242-2180

## OFFICERS

President  
GEORGE R. FELTON, JR.  
Director  
Greater Baton Rouge Zoo

President - Elect  
WARREN J. ILIFF  
Director  
Dallas Zoo

Vice President  
L. RONALD FORMAN  
Director  
Audubon Park &  
Zoological Garden

Immediate Past President  
ELVIE TURNER, JR.  
Director  
Fort Worth Zoological Park

Executive Director  
ROBERT O. WAGNER  
Oglebay Park  
Wheeling, WV

## DIRECTORS

PALMER E. KRANTZ, III  
Director  
Riverbanks Zoological Park

SHARON J. PROCTOR, PH.D.  
Curator of Education & Interpretation  
Vancouver Public Aquarium

JAMES C. SAVOY, D.V.M.  
Director  
Phoenix Zoo

GILBERT K. BOESE, PH.D.  
Director  
Milwaukee County Zoological Gardens

CHARLES H. HOESSLE  
Director  
St. Louis Zoological Park

EDWARD C. SCHMITT  
Assistant Director/Animal Collections  
Chicago Zoological Park

ROBERT B. BEAN  
Director  
Louisville Zoological Garden

JOHN H. PRESCOTT  
Director  
New England Aquarium

LEE G. SIMMONS, D.V.M.  
Director  
Henry Doorly Zoo

8 April 1986

Mr. Steve Iserman, Director  
Minnesota Zoological Garden  
12101 Johnny Cake Ridge Road  
Apple Valley, MN 55124

Dear Steve:

We are very pleased to add to the congratulations you received from Accreditation Commission Chairman David Zucconi upon receiving Reaccreditation.

We are enclosing the reevaluation report prepared by George Felton during his visit.

Warm regards,

AMERICAN ASSOCIATION OF  
ZOOLOGICAL PARKS AND AQUARIUMS

Robert O. Wagner  
Executive Director

ROW/jkw

Enclosure

Copies to: AAZPA Accreditation Commission  
George Felton

AAZPA ACCREDITATION COMMISSION  
REEVALUATION FORM

Name of Institution Minnesota Zoological Garden

Director or Chief Administrator Stephen A. Iserman

Veterinarian Frank Wright, DVM (Full-Time )  
(Part-Time )

Current Annual Operating Budget  
(exclusive of capital improvements) \$6,147,000

Current Budget for Capital Improvements \$ 690,000

Number of full-time employees included in the institution's annual operating budget  
(not including federally funded special work programs) 146.0 FTE

Number of full-time employees on federally funded programs 1.5 FTE

Total number of full-time employees 147.5 FTE

Of this number, how many are involved in direct animal care programs? 45 FTE

Substantial change in number of employees since Accreditation + \_\_\_\_\_  
\* - 17.5 FTE

Cumulative total of capital expenditures since Accreditation \$2,418,794

Include here the annual attendance figures of the institution for the last three years

FY (1983) 825,262 FY (1984) 900,855 FY (1985) 928,372

New programs or projects undertaken by the institution since Accreditation:

Formal research programs; in-house bird shows; Outfitters post; in-house membership program; in-house continuing education program; Zooschool; fundraising; SSP participation.

In your opinion, is the institution's educational program commensurate with the size of the facility? Yes  No

\*\* Are the levels of animal management and husbandry programs of this institution professionally acceptable? Yes  No

Comments: \*\*Included with this report is the last two (2) VS 18-8 forms from USDA veterinarian. These forms were filled out by a new veterinarian for this area under the supervision of his superiors from another state and in my opinion was totally over zealous in his inspection. I personally checked

(Attachment)

DEC 2 1985

Include here the total specimens and species held by the institution for each of the last three years (1984) 1751 specimen 352 species

(1983) 1,302 specimen 301 species (1982) 1,196 specimen 321 species

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Is the institution involved in cooperative animal breeding programs with other institutions? Yes XXXX No \_\_\_\_\_

\*\*\*Comments: Lists attached of SSP participation and loan agreements  
\_\_\_\_\_  
\_\_\_\_\_

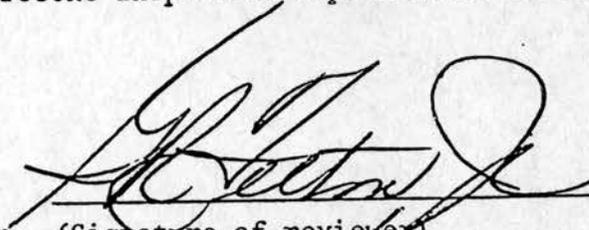
In your opinion, has the institution addressed the areas of concern pointed out by the original Accreditation Visiting Committee? Yes XXXX No \_\_\_\_\_

Comments: Although there is still an apparent lack of storage space in some areas every effort has been made to see to it that all work areas, corridors and other such spaces have been cleared of all clutter.

In your opinion, does this institution continue to be Accreditable by the AAZPA? Yes XXXX No \_\_\_\_\_

Comments: \* Change in number of employees due to change in type of security procedures changed from security guards at night to the use of already available maintenance engineers.

Please attach copies of the two most recent inspection report forms issued by the USDA, Animal Welfare Act.

  
(Signature of reviewer)

11/25/85  
(Date)

ATTACHMENT

\*\* ANIMAL MANAGEMENT & HUSBANDRY:

each of the violations and with exception of a few which the Minnesota Zoo maintenance staff was working at that time to correct, such as the necessary painting, found many of them to be unreasonable. Some of these were such things as the use of wooden walls in hoofstock management areas, standing water in moose yard, wolverines chewing on a rubber bowl which it was given basically for that reason, peeling paint in non-management areas and rust on angle iron door stops in the musk ox management area. All of these were written up along with other items found to be equally unjustified. For the above reasons when Kris Vehrs, Robert Wagner, Don Bruning and myself visit with Dr. Crawford in Washington early in the month of December we will discuss these items and others with him. I am suggesting that the largest part of the inspection be disregarded by the Accreditation Commission as it pertains to the re-accreditation of the Minnesota Zoo.

COOPERATIVE ANIMAL BREEDING PROGRAMS

\*\*\* SSP involvement includes:

Mongolian Horse  
Siberian Tiger  
Small Clawed Otter  
Bali Mynah  
Lion-tailed Macaque  
Malayan Tapir

This is one of the finer institutions in this country and its span of exhibits and internal growth is continually moving forward. The greatest change which has taken place recently is the fact that the 1985 State Legislation took the first steps to phase the Minnesota Zoo out of State government, procurement, finance and personnel. Removal from these systems will produce a more efficient and effective zoo operation. The changes made reflect a positive attitude of support and recognition of the importance of the Minnesota Zoo to the State.

# Minnesota Zoo

## School Program Opportunities

1989-90



## 1989-1990 SCHOOL PROGRAM HIGHLIGHTS

### GUIDED FIELD TRIP TOURS..... p. 2

Explore Minnesota  
Vanishing Animals  
Animal Cover-Ups  
Timber Wolf  
Investigating Sealife  
Behind-the-Scenes  
Special Needs  
Omnibus Tour

### SELF-GUIDED FIELD TRIPS..... p. 3

### DAILY PROGRAMS.....pp. 4 & 5

Zoo Orientation  
Zoolab  
Animal Demos  
Skytrail  
Children's Zoo  
Bird Show  
Lunch Options  
Housing/Overnight Accommodations

### SPECIAL EVENT DAYS..... p. 6

Art and Photo Day  
Foreign Language Days

### ADDITIONAL OPPORTUNITIES

Zoo Ark..... p. 7  
Speaker's Bureau..... p. 7  
Teachers' In-Services..... p. 8 & 9  
Zoo School..... p. 10  
Job Shadows/Career Program..... p.10  
A.D.O.P.T..... p.11  
Band Concerts..... p. 11  
Zoo Volunteer..... p. 11  
Zoo Memberships..... p. 11

### REGISTRATION.....p. 12

Scheduling  
Fees  
Zoo Hours

### ORDER BLANK.....p. 13

Come and explore animals and habitats from around the globe. The Minnesota Zoo is a vital resource, a place of discovery, a home to a variety of animals. School programs are inexpensive, exciting and thought-provoking. A wide spectrum of learning opportunities is available.



#### Minnesota Zoo Staff

Zoo Director - Kathryn Roberts, Ph.D.  
Conservation Division Director - Ron Tilson, Ph.D.  
Interpretive Programs Curator - Steven R. Hage  
School Programs Coordinator - Pam O'Brien  
Schedulers - Audrey Austin/Peggy Marquardt  
Naturalist - Beth Wilson  
Artists - Linda Escher, Mary Jo Olson

The Minnesota Zoo is accredited by the American Association of Zoological Parks and Aquariums (AAZPA).

The Education Department has been accredited by the North Central Association of Colleges and Schools (NCA) as a Special Function School (sciences) for the purpose of the development and maintenance of high standards of excellence in programming and staffing.

School programs at the Minnesota Zoo assist educators in meeting the elementary environmental education requirements set by the Minnesota State Board of Education.

"In the end we will  
conserve only what  
we love. We will love  
only what we  
understand, and we  
will understand only  
what we are taught."  
Baba Dioum

## New This Year!

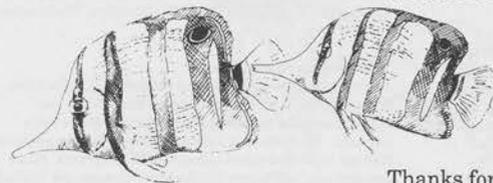
Koalas, those denizens from "Down Under", have come to make their home at the Minnesota Zoo, one of only six zoos in the country to exhibit these unique marsupials. Native to Australia, koalas spend much of their time sleeping amid the branches of the eucalyptus tree and munching on its leaves, their only food source. Come and see these charming creatures at the Koala Lodge.



**Koalas**  
**MINNESOTA ZOO**

## We're Building a Better Zoo!

On September 1, 1989, construction work began on the Tropical Coral Reef Exhibit at the Minnesota Zoo. The start-up and construction period for the exhibit will last approximately eighteen months. During that time Zoo visitors will be able to watch the progress on this exciting exhibit; however, many of the current exhibits in the Tropics Building will be affected by the construction. The majority of the birds and some of the other animals will be removed during construction and there will be times when it will be necessary to close the building entirely. Please call (612)431-9218 for current information.



Thanks for your support and understanding while we work to make this a better Zoo for all Minnesotans.

## FIELD TRIP OPTIONS:

The Education Department offers a variety of programs to meet the needs of students from preschool through high school. The programs have been organized according to the specific days of the week. Below are the program options and the scheduling procedures for each option.

### Guided Tour Options

Teachers making reservations for a guided tour will receive a complimentary curriculum unit of their choice. Fee: \$1.00 per student

#### Explore Minnesota Learning Excursion Tour

The hoot of an owl, the antics of the otter, the construction of a beaver dam, all this and more are covered in a one hour tour through the Minnesota Trail exhibit. Tours are available for K-3, 4-6, and 7-12th grade students on Mondays, Wednesday, and Fridays, October 9 through March 16.

#### Vanishing Animals Tour

The loss of animal species in the wild is accelerating. On Tuesdays and Thursdays, October 9 through March 16, we offer a provocative tour covering threatened and endangered animals for grades 4 through 12. We look at the Minnesota Zoo's role in wildlife conservation, ways you can get involved in saving the world's wildlife, and some special animals struggling to survive. Tours are available for 4-6 and 7-12 grade students.

#### Animal Cover-Ups Tour

Children will observe furry mammals, scaly reptiles and colorfully feathered birds on these hour-long tours. Volunteers will highlight material written in the accompanying curriculum unit "Animal Cover-Ups". Tours are available for grades K-3 only, Tuesdays and Thursdays, October 9th through March 16th.

#### Timber Wolf Tour

How do wolves survive in their rugged wilderness environment? The major big-game predator in the Northern Hemisphere has numerous specializations that adapt it perfectly to its role. Visit the wolf exhibit with a volunteer guide. Concepts emphasized in this new 45 minute tour are found in the Timber Wolf Species Packet. A curriculum unit will be sent in advance of the Zoo field trip. Tours are only available for grades 4-6 on Mondays, Wednesdays, and Fridays, November 6th through March 16th.



NEW

#### Investigating Sealife Tour

Allow one hour to tour the sealife area. In addition to learning about the animals in the aquariums, biofacts will enhance the students understanding of the underwater world. Accompanying curriculum will be available in 1990. Tours are only available for grades K-6 beginning January 15, 1990 (Mondays, Wednesdays and Fridays).

#### Behind-The-Scenes Tour

Attention teachers of grades 4 through 12! Join a Zoo Naturalist for a behind-the-scenes tour at the Zoo. Learn about the natural history of some of the Zoo's animals. Find out how Zookeepers care for the animals. Become informed about conservation programs. Allow one and one-half hours for the tour. Groups are limited to twenty people. The fee is \$55.00, plus applicable admission fees. Call (612)431-9331 for more information and scheduling.

#### Special Needs Tour

This program is only available for disabled groups. Specially trained volunteers will guide students through the Minnesota Trail and Zoo-Lab. Allow one hour for the tour. Class size is limited. Tours are available throughout the school year.

#### Omnibus Tour

Assisted by a Zoo volunteer, 2nd and 3rd grade students in the "Omnibus" Gifted and Talented Program get a close up view of three specially selected animals. The class is geared to the needs of the Omnibus program. Audience size is limited to 30. Fee is \$35.00. Scheduled only on Wednesdays.

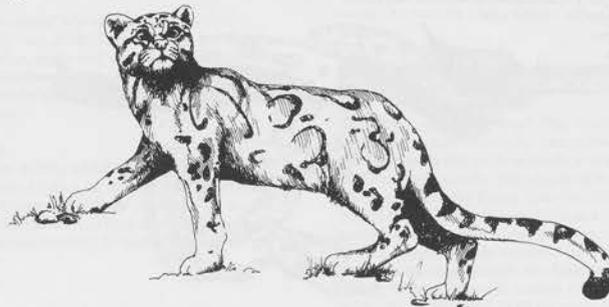
### Curriculum Units

A specially designed curriculum unit is included with the cost of a tour, or available to self-guided groups for a fee. When the materials are mailed as part of the tour package, only a tour unit is included. If purchased through the Gift Store the packet will include the unit of choice, poster, Zoo album and booklet for \$17.50

### The Self-guided Field Trip

Teachers tour the Zoo with their classes at their own pace when the Self-Guided field trip option is selected. Upon arrival at the Zoo, groups will be given a short orientation previewing Zoo happenings. Some daily programs must be pre-scheduled through the School Program Scheduler. See page 10 for more details.

Curriculum packets have been designed to accompany a self-guided tour of the Zoo. The unit contains a variety of animal-related concepts. The packets purchased through the Zoo Gift Store (see Order Blank on back page) include a unit of choice, poster, Zoo Guide, and animal book. We suggest that you purchase the packet at least four weeks in advance of your scheduled field trip. Spring dates for a self-guided field trip fill quickly, so please make your reservations early.



## DAILY PROGRAMS

### Orientations

We welcome your school group to the Zoo with a brief introductory program given upon your morning arrival. Volunteers will provide school groups with a schedule of the events happening on that day, directional guidance, animal information and the rules of the Zoo. This program is required for all school groups scheduled through the School Program and arriving between 9:45 a.m. and 11:00 a.m.

### Zoolab

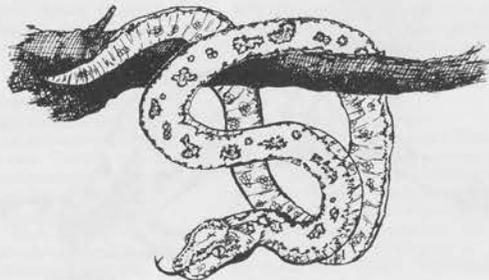
ZOOLAB offers students a hands-on contact experience with over forty species of animals. Trained interpreters bring to life concepts of biodiversity, classification, adaptation, and conservation. Common myths are dispelled. And hopefully, a deeper appreciation of the "Living Earth" is instilled.

Admitted by reservation only, school groups can schedule a twenty minute visit in Zoolab between the hours of 10 a.m. and 4 p.m. Scheduled times are arranged through the Scheduler when you make your trip reservations.

### Live Animal Demos

Periodically during the day, live animal demonstrations are presented in the Zoo Theatre. Through the use of live animals and audio-visual aids, specially-trained Zoo volunteers offer the visitor a close-up look at a creature that shares the earth with us. Each program contains a clear conservation message.

No reservations are necessary. Check with the volunteer during your orientation to confirm the times of the demonstration, or refer to the signs posted on the Zoo Theatre doors.



4.

### Skytrail

Skytrail riders glide through a tree-top world above the Northern Trail, viewing animals found in their natural ecological setting: prairie, steppe, tundra and taiga. Passengers enjoy Skytrail's unique perspective in climate-controlled comfort. The visitor's 25 minute ride is enhanced by the personal natural-history narrative of the naturalist guide.

Skytrail operates all year. A discount fee of \$1.00 per person, age 6 and over, is available to organized school groups if arrangements are made in advance of the field trip. Specific departure times will be scheduled for these twenty-five minute rides. Tickets are purchased by the group leader at the time of arrival.\* Students MUST be chaperoned while on Skytrail and must ride in a group.

Scheduled times are arranged through the School Scheduler. Weekday trains run from 11:00 a.m. to 3:30 p.m. from Oct. 1 through March 31 weather permitting.

Weekday trains run from 10:30 a.m. to 5:00 p.m. from April 1 through September 30.

\*During the summer months and on Free Tuesdays (the second and third Tuesdays of each month) no school groups will be scheduled; however, they may ride on a first-come-first served basis for the regular rate of \$2.00 per person.

### Children's Zoo

See exotic domestic animals from around the world. Discover how domestic animals help people and how people live with their animals. (Horses, a donkey, goats, llamas, reindeer, chickens, ducks, geese, koi, a yak, guinea pigs and rabbits are all found in the Children's Zoo.)

Daily offerings throughout the year.

11:00 - Reindeer Presentation  
A zookeeper will introduce you to these northern animals and explain how the people of Scandinavia and Siberia depend on them to live in their cold climate. See a reindeer up close. The demonstration lasts about 20 minutes.



1:00 - Llama Presentation  
Meet a llama and examine the various ways native South American people use these animals. Feel llama wool and yarn. Try on clothing knitted from llama wool. Do llamas spit? Find out in the Children's Zoo. Program is about 20 minutes long.

12:00 - Ask-a-Keeper (By prior arrangement only)  
Teachers of grades 5-12 can request an opportunity for their class to interview a Zookeeper about careers at the Zoo. Schedule with the School Scheduler.

### Summer Offerings

**Puppet Show**  
"The Wide Wonderful World of Domestication"  
Investigate the uses of elephants used in India, llamas in South America, goats and cows in Africa and reindeer in Saamiland.  
(Offered weekends in May and September, daily June through August.)

### Contact Yard

Open weekends in May and September, daily June through August - 10:00 a.m. to 5:30 p.m. See Nubians, Toggenburgs, Angora, and Pygmy goats. Vending machines filled with animal feed are available to give the children an opportunity to feed the goats.

### The "World of Birds" Show

Free flying hawks, talking and singing parrots, wide-eyed owls, even a vulture and condor entertain and educate Minnesota Zoo visitors in the World of Birds Show. New this year is the Toco Toucan.

The antics of these amazing birds can be seen at 11:30 a.m. and 1:30 p.m. every weekday but Tuesday.

Throughout this direct encounter, the World of Bird Shows conveys the importance of birds in our environment and promotes the conservation of wild life habitats.

Check with a volunteer upon your arrival for the location of these half-hour shows.



### Lunch Options

We encourage classes to eat on their buses. A beautiful picnic area with shelter is available for fall, spring and summer field trips. Limited areas are available for eating indoors in a designated area of the Education wing. Seating is available on a first-come-first-served basis. An on-site Dairy Queen offers a full line of fast food.

### Housing/Overnight Accommodations

Have you come a long way? The Minnesota Zoo is located near some beautiful campgrounds where you and your class can enjoy a rustic overnight. You can find out about nearby camping facilities by contacting the Dakota County Parks Board at (612) 559-9000. Wilder Forest and Lebanon Hills are two parks with accommodations available for group camping. Lebanon Hills is approximately one-half mile from the Zoo and can be contacted through the Dakota County Parks Board. Wilder Forest is located along the St. Croix River. Call (612) 433-5198 for more information. Both park boards also list many other options.

5.

## SPECIAL EVENT DAYS

### Art and Photo Day January 26, 1990

Students bring sketch pads or cameras and tap into their creativity in a unique setting where exotic animal models abound. Local artists will be working at selected Zoo exhibits in a variety of media. The day is designed for art and photography students in grades 5 through 12.

Let our Zoo scheduler help you plan an exciting field trip. Call (612) 431-9218. Please make your reservations early as we must limit attendance because of space restrictions.



### Foreign Language Days German Day, Friday, February 2, 1990 French Day, Wednesday, February 7, 1990 Spanish Day, Wednesday, February 14, 1990

Look beyond the classroom to spark language studies. Plan a field trip with a global flair. Foreign Language Days at the Zoo are open to 9th through 12th grade language classes. Students receive passports which are stamped as they visit exhibits and hear presentations in the language of the day. Upper level classes serve as "animal experts" at various exhibits, including the World Barn in the Children's Zoo, interpreting animal information in German, French, or Spanish. Students practice their speaking and listening skills in a day full of activities. Animal shows and the Zoo orientation are interpreted in the designated language.

Curriculum material written by Zoo staff, teachers, and the Modern Language Department of the State of Minnesota is included in the \$2.20 admission fee charged for the day. Because of space limitation on these popular days, early reservation is suggested. Call the Scheduling Office at (612)431-9218.

## ZOO ARK

Experience a close-up and educational look at some animals from the Minnesota Zoo by inviting the Zoo Ark to your school. During a forty-five minute program, Zoo Naturalists interpret such topics as adaptations and conservation with the use of a slide show and five to six live animals. Program topics to choose from include:

### The Zoo Ark (Grades 4-12)

Discover why animal species are disappearing at an alarming rate. We'll look at what the Minnesota Zoo is doing to help and what you can do to help save the world's wildlife from extinction.

### Millions of Models (Grades K-6)

Explore animal designs with us as we take a look at how an animal's shape, color and size help it survive in the wild.

Fees for this forty-five minute program, with or without a slide show, are:

\$125 for the first program\* within a 100 mile radius of the Zoo  
\$150 for the first program\* within 101-150 miles, and  
\$175 for the first program\* 150 miles or farther.

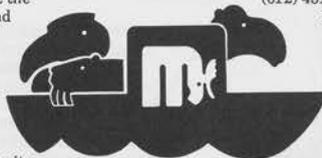
\*There is an additional charge of \$75 for any additional program at the same location on the same day.

### Scheduling:

The Zoo Ark is scheduled by the Zoo Ark Naturalists at (612) 431-9228. Please leave a message if the Naturalists are out doing a program; your call will be returned as soon as possible.

Beginning December 1, 1989, reservations will be taken up to one year in advance of the day you call.

We visit schools within a one-hour radius of the Zoo year-round, weather permitting. Outstate ECSU's (Education Cooperative Service Units) are each visited once a year, either during the spring or fall.



## SPEAKER'S BUREAU: A MINNESOTA ZOO OUTREACH PROGRAM

Bring the Zoo into your classroom! Thirty to forty-five minute slide show presentations provided by Minnesota Zoo Volunteers are available on seven intriguing topics.

### Slide Shows Available

**The Wild World of the Minnesota Zoo (formerly 10 Years and Growing)**  
Take a trip behind-the-scenes at the Minnesota Zoo. Learn about the different diets, care, and maintenance required by the various animals of a zoo. Available for grades K-Adult.

### Zoo Babies

Babies are irrisistable. We look at the ways different animal babies are born, how their parents care for them, and their different methods of protection. Available for Preschool, K, and 1st grades.

### Animal Management at the Zoo

Take a trip behind-the-scenes at the Minnesota Zoo. Learn about the different diets, care, and maintenance required by the various animals of a zoo. Available for grades 4-Adult.

### Who Works at the Zoo?

What types of jobs are available at a zoo? Do you need extra schooling to qualify for a zoo position? Many different people keep the Zoo running. Meet the various people who have jobs at the Minnesota Zoo and what is needed to work in an always changing, always interesting place. Available for grades K-6th grade.

### A Part of Minnesota

Explore the fascinating animals and plants on the Minnesota Trail at the Zoo. Animals unique to Minnesota are found in beautiful exhibits which dramatically elicit their natural behaviors. Available for grades K-Adult.

### A Cry for Help

Why are animals vanishing? Examine the plight of endangered species. Are there some solutions that might save our world's wildlife? What are zoos doing? Available for grades 4-Adult.

### A Visit to the Zoo Vet

It is a busy, ever changing, always challenging job to be a veterinarian in a zoo. Come, walk behind-the-scenes to view the animal care procedures and the animal hospital at the Minnesota Zoo. Available for grades 4-Adult.

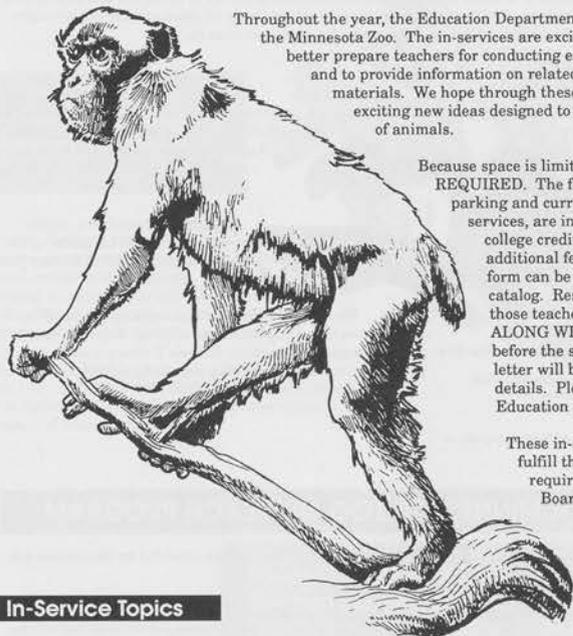
### Fee:

A forty-five minute program is \$25.00 for the first program and \$10.00 for an additional program at the same location, same day. (Maximum: Two programs per day at one school.)

Because of travel limitations, the Speaker's Bureau services only the metropolitan area.

A three week advance notice is necessary. Please call (612) 431-9234 for reservations and more details, Monday through Friday, 8:00 a.m. - 4:00 p.m.

## TEACHER'S IN-SERVICES



Throughout the year, the Education Department conducts Teacher's In-services at the Minnesota Zoo. The in-services are exciting, fast-paced, and designed to better prepare teachers for conducting effective class field trips to the Zoo and to provide information on related environmental education materials. We hope through these in-services to offer teachers exciting new ideas designed to heighten the student's awareness of animals.

Because space is limited, **PRE-REGISTRATION IS REQUIRED.** The fees, which include admission, parking and curriculum materials for the in-services, are indicated below. Renewal credit or college credit is available. There is an additional fee for college credit. A registration form can be found on the last page of this catalog. Reservations are assured only to those teachers who return the completed form **ALONG WITH FEE PAYMENT.** Two weeks before the selected in-service a confirmation letter will be mailed with the in-service details. Please direct questions to the Education Secretary at (612) 431-9234.

These in-services help prepare teachers to fulfill the environmental education requirement set by the Minnesota State Board of Education.

### In-Service Topics

#### Introduction to Project Wild

Saturday, October 14, 1989 - 9:00 a.m. - 3:30 p.m. and  
Monday, October 30, 1989 - 4:30 p.m. - 6:30 p.m. \*

Trying to figure out what activities to use in the classroom that are environmentally directed? Project Wild is an exciting nationwide wildlife curriculum consisting of 80 interdisciplinary activities for use in grades K through 12. In-service participants will be introduced to Project Wild with hands-on activities and receive a guide to use in the classroom. This in-service is co-sponsored by the Department of Natural Resources' Non-Game Wildlife Program and the Minnesota Department of Education.

Fee: \$15

**\*This second class session is required for teachers signed up for college credit but is optional for other teachers.**

#### Aquatic Project Wild

Thursday, October 19, 1989 - 6:30 p.m. - 9:00 p.m. and  
Friday, October 20, 1989 - 9:00 a.m. - 3:00 p.m.

Study oceans, marshes, lakes, rivers and sea creatures. This agenda includes activities from the new "Aquatic Project Wild" curriculum guide and Zoo aquariums tours. The "Aquatic Education Activity Guide" for use in grades K-12 will be yours to take home.

Fee: \$15



#### Vanishing Animals

Saturday, January 6, 1990 - 9:00 a.m. - 3:00 p.m. and  
Tuesday, January 30, 1990 - 4:30 p.m. - 6:30 p.m.\*  
or  
Saturday, January 20, 1990 - 9:00 a.m. - 3:00 p.m. and  
Tuesday, January 30, 1990 - 4:30 p.m. - 6:30 p.m.\*

Zoos are helping in the worldwide effort to protect and preserve vanishing species. Through education, we develop an awareness of the problems of animals threatened with extinction. This in-service will cover information on endangered species represented at the Minnesota Zoo and on the programs designed to ensure their survival, such as the International Species Information System and the Species Survival Plan of the American Association of Zoological Parks and Aquariums.

Fee: \$20

**\*This second class session is required for teachers signed up for college credit but is optional for other teachers.**

#### Minnesota Wildlife I - (Off-site at Waseca, Minnesota)

Friday, March 30, 1990 - 6:30 p.m. - 9:00 p.m. and  
Saturday, March 31, 1990 - 9:00 a.m. - 3:00 p.m.

Study the timber wolf and trumpeter swan. Learn how to enrich your classes with phenology, the science of natural events and their relationship with weather and climate. This in-service is offered every other year in conjunction with Minnesota Wildlife II. The focus is on native Minnesota animals, particularly those at the Minnesota Zoo. Additional details on the exact location in Waseca for the in-service will be identified in the confirmation letter.

Fee: \$30



#### Minnesota Wildlife II

Friday, November 10, 1989 - 6:30 p.m. - 9:00 p.m. and  
Saturday, November 11, 1989 - 9:00 a.m. - 3:00 p.m.

This in-service at the Minnesota Zoo will provide teachers with information, activities and resource materials about moose, caribou, reptiles and wildlife management. Guest speakers, films and tours will enhance the busy day's agenda. This is a sequel to Minnesota Wildlife I which was offered in January, 1989.

Fee: \$20.00

**NEW**

#### Vanishing Rain Forests

Friday, February 9, 1990 - 6:30 p.m. - 9:00 p.m. and  
Saturday, February 10, 1990 - 9:00 a.m. - 3:00 p.m.

Learn about the incredible life forms found in rain forests. Discover specific actions that can be taken to help protect exotic jungle habitat. Educators interested in bringing rain forest issues into the lives of their students will want to participate in this new in-service. Teachers will receive classroom materials, participate in rain forest activities and go on a specialized tour of the Tropics.

Fee: \$20.00

## ZOOSCHOOL - SUMMER RESEARCH PROGRAM

**Program Dates:** June 11 to August 31,  
1990 (Monday through Friday)  
**Grades:** 10-11

Zooschool is a summer research program for accelerated senior high school students emphasizing applied animal behavior research in a zoo setting. The program introduces students to science research skills and related career opportunities. It also increases awareness of conservation biology and environmental issues.

Students conduct original behavioral research with guidance from Zoo staff, with emphasis on the application of their study results to the management and exhibition of captive animals. Classroom instruction focuses on animal behavior, zoo biology, conservation biology, and research methodology. Field trips are scheduled throughout the summer to provide additional contact with professionals in animal-related fields and to increase the student's knowledge of career opportunities. Lecture/slide presentations depicting results of the studies are given by students before family, friends, and Zoo staff on Zooschool Night and at each student's school. Students also produce research papers detailing their studies for publication in the 1990 Zooschool Journal. Participation in a science fair is encouraged.

The Zooschool program is supported by a grant from the National Science Foundation's Young Scholars Program. Students will receive full scholarships which cover tuition, supplies, transportation costs, and a meal allowance plus a small stipend. No tuition or additional program costs will be required for successful completion of the program.

High school sophomores and juniors (grades 10-11) with a biology background may apply. Selection of the program participants will be competitively based. Ten students will be accepted for the 1990 Zooschool session. Students from all Minnesota high schools are eligible. Students are responsible for arranging housing and transportation for the summer. Application materials will be available in mid-winter. Deadline for applying is April 30, 1990. For more information or application forms, contact the Education Department at (612)431-9234.



NEW

## JOB SHADOWS/CAREER PROGRAM

This pilot program offers opportunities for students, grades 8-12, to learn more about zoo-related careers. In option #1 students will spend part of a day with a zookeeper or horticulturist, learning about their daily activities and responsibilities. In option #2 students participate in a one-half hour interview with zookeeping or horticultural staff. Fees: \$30.00 per student for Option #1. There is no charge for Option #2, but registration is necessary for both options.

For more information, call (612)431-9331.

## BECOME A MEMBER OF THE MINNESOTA ZOO

A membership in the Minnesota Zoo brings you entertainment in a learning environment and allows you to visit your Zoo FREE for one full year. You'll receive other valuable benefits, too.

Join and receive the following membership benefits:

- ◆ Unlimited Free Admission for one year (Zoo is open every day except December 25)
- ◆ Free Parking
- ◆ Six Issues of "Minnesota Zoo Magazine"
- ◆ Admission to over 90 zoos across the country
- ◆ 20% discount off full-admission for non-member guests
- ◆ Members' only activities
- ◆ 10% discount at Zoo gift store
- ◆ Discount on Zoo classes

### Membership Categories:

**\$20 INDIVIDUAL** - One person named on membership card.

**\$25 INDIVIDUAL PLUS** - One person named on membership card PLUS one free guest each visit.

**\$35 FAMILY** - Maximum of two named adults residing at the same address and their children and/or grandchildren under 18 years of age.

**\$50 FAMILY PLUS MEMBERSHIP** - Same as family membership PLUS one free guest each visit.

**\$100 ADVOCATE MEMBERSHIP** - Same as family membership PLUS two free guests each visit.

## A.D.O.P.T.

Each year it costs over \$150,000 to feed the animals at the Minnesota Zoo. Your class can help care for its favorite Zoo animal by making a contribution to the A.D.O.P.T. program. For a donation of \$25.00 or more your class will receive a personalized certificate of adoption and animal fact sheet. The class name will be listed on the A.D.O.P.T. Parent Wall at the Minnesota Zoo. This is a great class service project. Call the A.D.O.P.T. office for details: (612) 431-9216.



## MINNESOTA ZOO VOLUNTEER

Volunteers are an important component of the Minnesota Zoo. They lead tours, staff information booths, present animal demonstrations, interpret with biofacts, attend speaking engagements and handle animals in the ZooLab. Volunteers provide that "special ingredient" which makes a Zoo visitor's visit memorable.

Your talents and time are valuable! Please consider sharing them with the MINNESOTA ZOO. The Minnesota Zoo Volunteer Program is nationally recognized for its training format and outstanding list of volunteer opportunities. If you would like more information about becoming a Zoo Volunteer, call (612) 431-9202 today!

## ATTENTION MUSIC DIRECTORS

The Minnesota Zoo would like to feature musical entertainment from schools throughout the state. During the months of May through August, groups will be scheduled weekdays. Performers and chaperones will receive free admission. The performing groups will be limited to 50 students. If you are interested in this program, contact the Special Events Department to schedule your performance at (612) 431-9257.

## REGISTRATION IS EASY

REGISTRATIONS ARE NOW TAKEN FOR THE ENTIRE 1989-90 SCHOOL YEAR. Since scheduling is heavy in late winter and early spring, we strongly encourage you to make your reservations early. Spring dates fill very early, so please make your reservation as far in advance as possible, or visit in the fall or winter when you can enjoy a less crowded day.

If your class is Pre-K or grades 1-12, and you are part of a structured educational experience, with ADVANCE reservations you qualify for school group admission rates to the Zoo.

### Zoo Admission Fees\*

(Minnesota Residents Only)

- ◆ Grades K-6 are allowed free admission all year.
- ◆ 1 Chaperone for every 5 preschoolers or Kindergarten admitted free all year.
- ◆ 1 Chaperone for every 10 first through sixth grade students free all year.

- ◆ Students in grades 7-12: \$1.20 admission fee per student charged throughout the year.
- ◆ 1 Chaperone for every 15 students admitted free all year.
- ◆ Additional adult chaperones: \$3.20 all year.

(Out-Of-State Students)

- ◆ Grades K-12: \$1.20 admission fee per student charged throughout the year.
- ◆ Chaperones: \$3.20 admission fee charged throughout the year.

### Guided Tour Fees

Guided tours, which must be scheduled in advance, are a \$1.00 per student; chaperones free.

### Special Event Days Fees

Foreign Language Days students scheduled in advance are charged \$1.00 per student plus \$1.20 for admission.



The Minnesota Zoo is open seven days a week. Winter hours run October 1st through March 31st - 10:00 a.m. - 4:00 p.m. Summer hours are in effect April 1st through September 30th - 10:00 a.m. - 6:00 p.m. (until 8:00 p.m. Sundays).

\*Prices and program offerings are subject to change.

### Parking Fees

Parking is \$5.00 per bus (the bus driver is admitted free) and \$1.00 per car/van.

### Skytrail Fees:

Discount rates are \$1.00 per person (6 years and older) if pre-scheduled and purchased by a school group. No school groups are scheduled for Free Tuesdays or during the summer months (mid-June to September 1); at those times, the regular rate of \$2.00/person is charged to all riders. Children five and under are free throughout the year.

To register, call (612)431-9218 during the Schedulers' hours: 8:00 a.m. to 4:00 p.m. Monday through Thursday. PLEASE have the following information ready:

- ◆ selected date and arrival time
- ◆ number of students and number of chaperones
- ◆ school address/zip code/phone number
- ◆ names of the lead teacher(s)
- ◆ program selection
- ◆ preferred ZOOLAB times
- ◆ Children's Zoo scheduling
- ◆ number of students/chaperones

## RESOURCES ARE AT YOUR FINGER TIPS

through the Minnesota Zoo Gift Store.

The curriculum packets listed below are extensive animal units 20-30 pages in length. They include concepts and objectives, instructional activities for classroom use, vocabulary list and bibliography. The packets, which cost \$17.50, include a unit of choice, poster, Zoobook and a Zoo Guide (unless otherwise indicated). If teachers have registered for a guided tour, they will receive a curriculum unit with their registration materials in advance of their trip at no cost. School groups that register for a self-guided field trip must use the order blank below to receive curriculum materials.

### ORDER BLANK

Prices include state tax, postage, and handling. Please allow 3-4 weeks for mailing. Send requests to ZOOSTORE, MINNESOTA ZOO, APPLE VALLEY, MN 55124. Prices are subject to change.

Send Materials To:

Name \_\_\_\_\_  
 Street \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
 Phone Number \_\_\_\_\_ Grade Level \_\_\_\_\_

#### PUPPETS

Raccoon	\$16.00	_____
Wolf	\$11.00	_____
Toucan	\$11.00	_____
Moose	\$14.00	_____
Cow	\$13.00	_____
Subtotal	\$	_____

#### A/V MATERIALS

"COME TO LIFE IN MINNESOTA"  
 Includes a booklet, cassette and filmstrip.  
**Cost \$8.00**

"A ZOO FOR ALL SEASONS"-Video Tape  
 An exciting tour of the Minnesota Zoo.  
**\$19.95**

TOTAL \$ \_\_\_\_\_

#### LEARNING EXCURSIONS

Cost is \$17.50 per packet. Packets include a unit of choice, poster, and a filmstrip for Minnesota Learning Excursions or a Zoo Guide and Zoobook for Tropics and Northern Trail Learning Excursions. Please indicate the correct age group and area of interest. **Additional excursions are \$5.00 each.** (Teachers who have registered for a guided tour will be sent a unit, free of charge, in advance of their field trip.)

Exploring Minnesota	K-3	4-6	7-12	_____
Visiting the Tropics	K-3	4-6	7-12	_____
The Northern Trail		4-6		_____
Subtotal	\$			_____

#### CONCEPT PACKETS

Cost is \$17.50 per packet. Packets include unit of choice, poster, Zoo Guide, and book. Please indicate the correct age group. Additional units cost \$5.00 each.

Animal Homes	Preschool	_____
Locomotion	K-2	_____
Body Coverings	1-3	_____
Vanishing Animals	4-6	_____
Camouflage	4-6	_____
Habitats	7-9	_____
Animal Conservation	10-12	_____
Subtotal	\$	_____

#### FOREIGN LANGUAGE PACKETS

Cost is \$17.50 per packet. Packets include a selected language unit, poster, and filmstrip. Additional units cost \$5.00 each. (If you have registered to attend one of the Foreign Language Days at the Zoo this year, a unit of choice will be sent to you in advance of your field trip at no cost.)

German	_____
French	_____
Spanish	_____
Subtotal	\$ _____

#### WILDLIFE EDUCATION BOOKLETS

Cost \$3.50 each, Wildlife Education, Ltd.

Animal Wonders	_____
Apes	_____
Baby Animals	_____
Bears	_____
Birds of Prey	_____
Deer, Moose, Elk	_____
Endangered Animals	_____
Night Animals	_____
Owls	_____
Parrots	_____
Snakes	_____
Tigers	_____
Wild Horses	_____
Wolves	_____
Sub-total	\$ _____

### Minnesota Zoo Teacher's In-service Registration Form

Please register me for the following in-services:

Introduction to Project Wild	October 14 & October 30, 1989	Fee: \$15.00
Aquatic Project Wild	October 19 & 20, 1989	Fee: \$15.00
Minnesota Wildlife II	November 10 & 11, 1989	Fee: \$20.00
Vanishing Animals	January 8 & January 30 or January 20 & January 30, 1990	Fee: \$20.00
Vanishing Rain Forests	February 9 & 10, 1990	Fee: \$20.00
Minnesota Wildlife I (Waseca)	March 30 & 31, 1990	Fee: \$30.00

Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
 Grade taught \_\_\_\_\_ Home Phone \_\_\_\_\_  
 School Phone \_\_\_\_\_  
 Name of School \_\_\_\_\_  
 I wish to receive college credit: yes [ ] no [ ] Enclosed is: \$ \_\_\_\_\_

Please include payment in full. Registrations without accompanying payment can not be assured. Make checks payable to: Minnesota Zoo Continuing Education. Send checks and registration form to Education Department, Minnesota Zoo, Apple Valley, Minnesota 55124. Phone (612)431-9234.

## EXPLORE THE MINNESOTA ZOO

We can provide you and your class with programs and animal information to meet a variety of needs.

### THE MINNESOTA ZOO OFFERS

**Guided Tours** - an excellent way to enhance your field trip at the zoo.....see page 2.

**Special Event Days** - Art, Photography and Foreign Language students have special events happening at the Zoo during the school year.....see page 3.

**Daily Programs** - Orientations, Zoolab, Skytrail, Bird Shows and Children's Zoo will round out your field trip experience.....see pages 4 and 5.

**Teacher In-Services** - The topics are wild and informative; college credit is available.....see page 8.

**Zoo Ark** - We travel throughout the state to bring live animal programs to schools .....see page 6.

*PLEASE SHARE THIS CATALOG WITH OTHER TEACHERS*

**Minnesota Zoo**  
13000 Zoo Blvd.  
Apple Valley, MN 55124

Non-Profit Org.  
U.S. Postage  
PAID  
St. Paul, MN  
Permit 4076

CONFIDENTIAL  
AAZPA ACCREDITATION REVIEW

After completion, copy for  
your records and return the  
original to AAZPA.

OFFICE USE ONLY  
Date Mailed 2/28/90  
Date Returned \_\_\_\_\_  
Received by \_\_\_\_\_  
Review # \_\_\_\_\_

GENERAL INFORMATION

1. MINNESOTA ZOOLOGICAL GARDEN  
Name of Institution
2. 13000 Zoo Boulevard  
Street
3. Apple Valley, MN 55124-8199  
City State Zip
4. (612) 431-9200  
Area Code & Telephone Number
5. Kathryn R. Roberts, Ph.D.  
Director
6. General Director  
Title
7. May 16, 1990  
Date
8. Briefly describe your institution's  
stated purposes.  
  
X Copy attached

GOVERNING AUTHORITY

9. Has the governance of your institution  
changed since the last accreditation  
inspection; i.e., city to society, etc.  
  
    Yes   X   No  
  
a. If yes, submit information regard-  
ing the new governing authority. In  
the materials, include policies,  
terms of service, structure, etc.  
  
    Copies attached
10. Submit the name and address of the  
chairman of your governing authority.  
(effective July 1990)  
Edward N. Dayton  
445 Lake, Suite 308  
Wayzata, MN 55391

11. Are professional decisions expressly  
delegated to the professional staff?

  X   Yes     No

STAFF

12. Submit a list of staff members and  
their titles. State full or part  
time. Include the annual salary for  
full-time staff only.  
  
  X   List attached
13. Submit a curriculum vitae for each  
member of your senior staff; i.e.,  
director, assistant director, curators,  
veterinarian.  
  
  X   Copies attached
14. Submit an explanation of your institu-  
tion's employee in-service training  
program.  
  
  X   Copy attached

SUPPORT ORGANIZATION

15. Do you have the same support organi-  
zation as during the last accreditation  
inspection?  
  
  X   Yes     No  
  
a. If no, please submit pertinent  
information on the new support organ-  
ization; i.e., name, fees, benefits  
to members, activities, etc.  
  
    Copies attached
16. Submit a copy of the support organiza-  
tion's most recent audited financial  
statement, if other than your governing  
authority.  
  
Our membership program is run by the Zoo  
    Copy attached itself.

SUPPORT ORGANIZATION (continued)

17. Number of memberships 15,800, representing # 47,400 individuals.

FINANCE

18. Submit a copy of your institution's most recent annual operating budget, including sources of funding.

X Copy attached

19. Amount budgeted for staff development - current year (conferences, continuing education, special training/seminars).

\$ 40,000.00

20. Last five years' attendance figures:

(FY)Year	Total
a. <u>1985</u>	<u>928,372</u>
b. <u>1986</u>	<u>836,211</u>
c. <u>1987</u>	<u>963,462</u>
d. <u>1988</u>	<u>822,200</u>
e. <u>1989</u>	<u>941,150</u>

21. List those major projects planned over the next five-year period with cost (real or estimated) for each, including sources of funding.

X List attached

22. Cumulative total of the costs of capital improvements since the last accreditation inspection.  
\$ 1,386,065 (from audited financial statements for FY86-89).

23. Submit a list of grants received during the last three years.

X List attached

24. Submit a list of the new facilities added since the last accreditation inspection.

X List attached

SAFETY

25. Do you have a Risk Management or Safety Audit Plan in effect?

     Yes, copy attached      X No

But one is being developed by the State, and the Zoo will be included.

26. Submit a copy of your written procedure in the event of injury by a venomous animal. Zoo does not have any venomous animals.

X Copy attached

27. Submit a copy of your written procedure and recapture plan in the event of an animal escape.

X Copy attached

28. Submit a copy of other emergency procedures.

X Copy attached

29. Do you have a written procedure and training program for the handling and disposal of toxic/hazardous materials?

X Yes, copy attached           No

COLLECTION

30. Submit your most recent animal inventory in taxonomic order indicating sexes.

X Copy attached

31. Is your institution current in its participation with ISIS?

X Yes           No

32. What percentage of your institution's collection is registered with ISIS?  
64 % (fish and invertebrates are not registered with ISIS)

- a. Are all of your institution's holdings of endangered, CITES I and SSP/Studbook species registered with ISIS?

X Yes           No, list attached

33. Explain in detail the record-keeping system utilized for those animals not registered with ISIS?

X Copy attached

34. Other than ISIS, are animal records duplicated and stored in a fireproof container at a separate location?

     Yes      X No

COLLECTION (continued)

35. Submit a copy of your animal acquisition/disposition policy, including a copy of your animal loan agreement.

Copy attached

36. Is your institution currently participating in ARKS?

Yes      No

37. Do you utilize exotic wildlife in off-premises situations (i.e., shopping malls, sporting events, school programs, theatrical productions, etc.)?

Yes      No

- a. If yes, submit your written policy, including which animals are utilized, how many persons are required to accompany the animals, what situations are acceptable/unacceptable, etc.

Copy attached

VETERINARY CARE

38. Do you employ a full-time veterinarian?

Yes      No

- a. If no, submit details on your veterinary care program and a copy of the veterinarian's formal agreement.

Copy attached

39. What is the distance between the veterinarian's office/residence and your facility? 0 (on site)

40. Submit a copy of your last two USDA inspection report forms.

Copies attached

41. Are M99, M50-50 or other controlled drugs utilized by your institution?

Yes      No

If yes, please provide the following information:

- a. List those staff members authorized to administer M99 and M50-50.

Peregrine Wolff, DVM  
Kristine Petrini, DVM

- b. Is a Class 5 safe utilized for the storage of controlled drugs?

Yes      No

- c. Submit your institution's written protocol regarding the use of M99, M50-50 and other controlled drugs, including emergency procedures when a licensed veterinarian is not present.

Copy attached

CONSERVATION

42. List your institution's involvement in SSP programs.

List attached

43. Briefly describe your institution's involvement with similar institutions in cooperative conservation programs.

Copy attached

44. Briefly describe your institution's conservation programs. Submit your institution's conservation literature.

SSP program participation; local, national and international program participation; K-12 school programs are all conservation oriented curriculum

See also pg. 5-8 of Zoo's Strategic Plan  
 Copy attached included in #57.

SECURITY

45. Do you employ security officers?

Yes      No



RESEARCH (continued)

56. Does your institution have a formal research policy?

Yes, copy attached     No

57. Provide the name and title of the staff person responsible for coordinating the research program.

Gerald Binczik

Name

Conservation Biologist

Title

OTHER ACTIVITIES

58. Does your institution have a formal master plan?

Yes     No

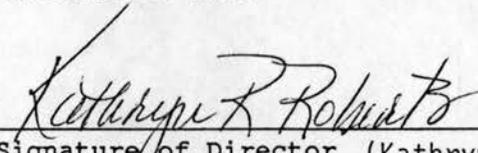
59. In what year was the master plan adopted by your governing authority?  
1969

60. When was the master plan last reviewed/updated? 1987

Please submit any additional information, new materials or other documents that may have a bearing on your institution's accreditation.

Please sign, date and return this form as soon as possible.

NOTE: All questions must be answered, as well as all required materials submitted. If a question is not applicable, please indicate as N/A.

  
\_\_\_\_\_  
Signature of Director (Kathryn R. Roberts)

May 16, 1990

\_\_\_\_\_  
Date

8. Briefly describe your institution's stated purposes.

As stated in the Minnesota Zoological Garden's (MZG) Long Range Plan (June 19, 1987), the mission of the MZG is **"To strengthen the bond between people and the living earth."** This statement, affirmed by the board in January 1987, is the touchstone of the institution. Every strategy and plan for the future is checked against these words to ensure that the central reason for the Zoo's existence is kept in view.

This mission requires attracting a broad spectrum of the public to the site. In order to accomplish this, the MZG offers its visitors an interesting and pleasant recreational experience. Underlying this statement is the firm conviction that humans are partners in the bond with the flora and fauna of this planet. The MZG's exhibit philosophy and animal management criteria proceed naturally from this conviction.

## Conservation Policy of the Minnesota Zoo

The Minnesota Zoo's stated mission is to "Strengthen the Bond Between People and the Living Earth." We acknowledge a responsibility to provide leadership in conserving the biological diversity of our planet and in protecting the wild species living under our stewardship.

Three cornerstones of the Minnesota Zoo's conservation policy --PRESERVATION, RECREATION, and EDUCATION -- are of equal weight and significance to our mission.

CONSERVATION is the management of the biosphere so that it may yield the greatest sustainable benefit to present and future generations of all living organisms. Conservation should be viewed as a framework in which environmental life-sustaining systems are managed in accordance with ecological principles to assure an indefinite existence of the systems and hence, the levels of life they support. To fulfill the Zoo's mission in conservation, we use the science of ecology and expand to include the aesthetic value of nature and the notion that humankind has an ethical responsibility to protect all life on earth.

Conservation at the Minnesota Zoo will foster an awareness of the intrinsic beauty of all life. Our environmental interactions will reflect respect, even reverence, for our living planet, so that we commit ourselves to protect all forms of life. This will be accomplished by showing individuals concrete actions they can take for conservation, making sure the message is positive and sharing what the Minnesota Zoo is doing for conservation. The Zoo must lead by example.

The Zoo's action-plan for conservation will include:

### Conservation through PRESERVATION

Habitat loss is a major cause of diminishing plant and animal numbers and species extinctions. The Minnesota Zoo will help protect the remaining habitat to the extent possible with available and appropriate resources.

As a Zoo we support the International Union for Conservation of Nature and Natural Resources (IUCN) policy statement for Captive Breeding -- "Habitat protection alone is not sufficient if the expressed goal of the World Conservation Strategy, the maintenance of biotic diversity, is to be achieved. Establishment of self-sustaining captive populations and other supportive intervention will be needed to avoid the loss of many species, especially those at high risk in greatly reduced, highly fragmented, and disturbed habitats. Captive breeding programs need to be established before species are reduced to critically low numbers, and thereafter need to be coordinated internationally according to sound biological principles, with a view to the maintaining or re-establishment of viable populations in the wild."

### Conservation through EDUCATION

The Minnesota Zoo is an educational institution that is committed to teaching our visitors about the relationships between humankind and the natural world. Education will expand the public's awareness of historical, current and future environmental issues; will teach our visitors the value of a specie's rights to occupy this living earth; and will suggest to our visitors how they personally can effect a change by becoming involved with a conservation program of their choice.

### Conservation through RECREATION

We support a RE-CREATION or rejuvenation of our visitors by the quality of their experience at the Minnesota Zoo. Through aesthetically rewarding displays of plants and animals we elevate the importance of each species to each of our visitors and thus strengthen the efforts of society to better preserve and conserve our living earth. Recreation will be structured so that the Zoo experience is a fun, exciting and creative process that strengthens the bond between people and the living earth.

**GUIDING PRINCIPLES FOR CONSERVATION PROGRAM DEVELOPMENT**

**FOR ENDANGERED SPECIES THE MINNESOTA ZOO WILL:**

- provide leadership, where possible, in worldwide endangered species programs.
- continue to support the preservation and restoration of endangered species' natural habitats.
- explore appropriate ventures that will further global conservation.
- work with conservation organizations worldwide involved with endangered species and biological diversity programs.
- share with visitors the status of global conservation and endangered species, what the zoo and other organizations are doing about it, and how individual visitors can help.

**FOR HABITAT PRESERVATION THE MINNESOTA ZOO WILL:**

- recognize the central role people play in habitat preservation and strive to convince visitors that individual actions can make a difference.
- strive toward giving visitors a global understanding of how habitat preservation works.
- strive to have our actions complement efforts of other conservation groups.
- become involved in habitat protection over a continuum of activities and programs.
- develop a process to share conservation successes with our visitors.
- become viewed as a local environmental model that promotes biological diversity, recognizes and makes optimum use of the Zoo's habitat types, and offers programs of conservation involvement for our visitors.

**FOR ENVIRONMENTAL STEWARDSHIP THE MINNESOTA ZOO WILL:**

- develop liaison programs with other environmental groups involved in land stewardship and to seek partnership programs with these organizations.
- develop programs that will demonstrate to visitors how to be more environmentally responsible and make visitors aware of what the Zoo is doing.
- develop exhibits devoted to environmental stewardship issues, including population growth, habitat destruction and environmental pollution (ozone depletion, global warming, and acid rain, etc.).
- to evaluate (new) exhibits relative to environmental "ethics."
- ensure that (where possible) exhibits will carry an appropriate environmental "ethic" that is balanced relative to negative/positive messages.

MINNESOTA ZOO  
Recreation Policy

1. The mission of the Minnesota Zoo is "To strengthen the bond between people and the living earth." To achieve this mission the Zoo provides innovative and appropriate recreational programs and activities designed to attract visitors to the Zoo throughout the year.
2. The Minnesota Zoo is a recreation resource for all Minnesotans and is the state's most popular year around tourist attraction. As such it provides and promotes entertaining, fun, stimulating, educational, and challenging experiences for Zoo visitors from throughout Minnesota and around the country.
3. Through recreational activities, the Minnesota Zoo is able to carry out its mission in the areas of conservation and education. The recreation activities attract visitors to the Zoo and provide resources needed to support all Zoo programs.
4. The objectives of the Zoo's recreation activities are:
  - to increase attendance
  - to increase revenue
  - to promote the use of the Zoo on a year around basis
  - to enhance the quality of visitors' experience at the Zoo
  - to further the conservation and education objectives of the Zoo through recreation.
5. Each staff member, volunteer, and board member shares the responsibility of contributing to the quality of the visitor experience at the Minnesota Zoo. Each is a link from the day-to-day operation of the Zoo to the fun, excitement, and learning of a visitor's trip to the Minnesota Zoo.

## Education Policy of the Minnesota Zoo

The Minnesota Zoo's mission is to "strengthen the bond between people and the living earth." By invoking this, we acknowledge the responsibility to provide leadership in conserving the biological diversity of our planet and in protecting the wild species living under our stewardship.

Three cornerstones of the Minnesota Zoo's mission -- PRESERVATION, RECREATION, AND EDUCATION -- are of equal weight and significance.

EDUCATION is a process for providing knowledge; it fosters the development of values. The mission of strengthening the bond between people and the living earth requires the Minnesota Zoo to provide knowledge about endangered species, habitat preservation and environmental stewardship.

The Minnesota Zoo is an educational institution committed to informing our guests about the inter-relationships between humankind and the environment. Education will expand the guests' awareness of historical, current and future environmental issues; will impart to them the value of a species' rights to occupy this living earth; and will suggest how we personally can effect change by becoming involved with conservation action programs.

The Zoo's action plan for EDUCATION will:

Provide people of all ages with Zoo learning opportunities to foster an appreciation of wildlife, wildlands and their stewardship.

Include conservation messages concerned with endangered species, habitat preservation and environmental stewardship. Global as well as local environmental issues of the biosphere will be included in Education activities; environmental stewardship will be invoked in all programming.

Support the Minnesota State Department of Education's priorities ensuring that the Zoo's K-12 grade programs reflect state environmental education mandates.

Continue current standards to maintain reaccreditation by the North Central Association of Colleges and Schools.

Create innovative Zoo curriculum for all schools with assistance from universities, colleges, state department professionals, wildlife managers and school teachers.

Promote the recreational value of the Zoo's interactive animal experience while simultaneously promoting its conservation ethic.

Present the Zoo's mission throughout the state utilizing interactive outreach activities designed to encourage guests to visit and join our Zoo.

Increase the staff's, Board's and volunteers' understanding of the Zoo's mission, improving their ability to provide guests an opportunity to strengthen the bond between people and the living earth.

## FACT SHEET

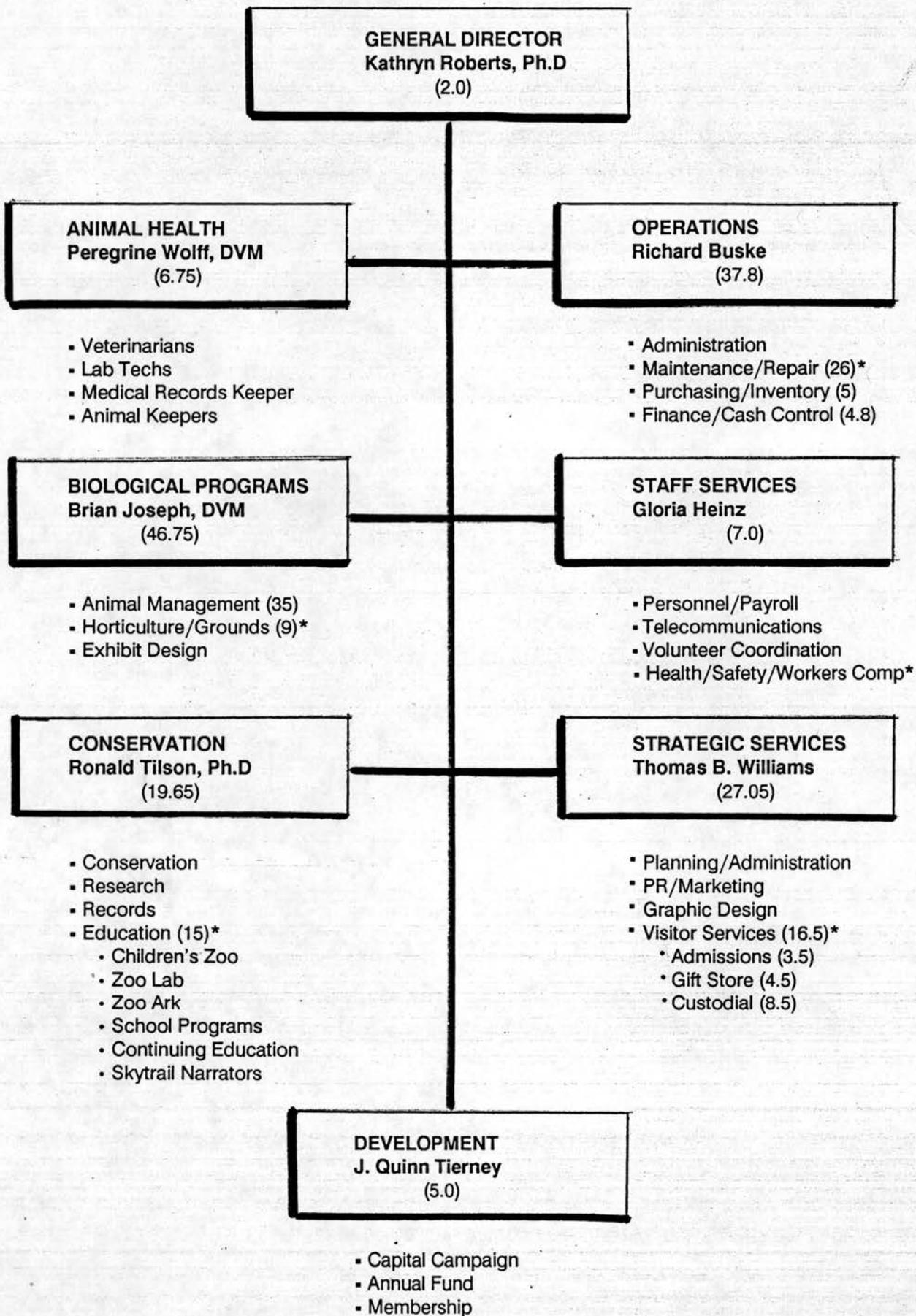
1990

### WHY THE MINNESOTA ZOO EXISTS

The mission of the Minnesota Zoo is to strengthen the bond between people and the living earth. To accomplish this the Zoo provides the highest quality recreational, educational, and conservation programs to the public. The Minnesota Zoo has achieved distinction in each of those areas.

- Recreation** The Minnesota Zoo is the leading year-round attraction in the State (averaging 850,000 visitors annually):
- \* Consistently ranked as one of the top the zoos in the United States, 25% of the visitors to the Minnesota Zoo come from Greater Minnesota, 25% are out of state visitors, and 50% live in the Twin Cities area.
  - \* Attendance at the Minnesota Zoo ranks among the top five in the country when compared to zoos in similar climates.
  - \* The Minnesota Zoo has higher winter attendance than New York's Bronx Zoo and the major zoos of Chicago, Philadelphia, Toronto, and Milwaukee.
  - \* Picnic grounds, summer music concerts, the WORLD OF BIRDS SHOW, animal rides, and other fun activities throughout the Zoo are part of summer visits to the Zoo.
  - \* Ten kilometers of cross country ski trails are a winter highlight, complemented by the warmth and greenery of the Tropics Building.
  - \* Throughout the year, special events designed to attract special audiences highlight the Zoo's schedule.
- Education** Annually 75,000 Minnesota students attend the Zoo at no charge on class field trips. Teaching materials, guided tours, and special teachers' in-service training are available:
- \* Zoo classes for pre-schoolers through adults are full throughout the year.
  - \* The Minnesota Zoo has received five awards for educational excellence from the American Association of Zoological Parks and Aquariums.
  - \* The Minnesota Zoo Education Department is accredited as a Special Function School by the North Central Association of Colleges and Schools.
- Conservation** The Minnesota Zoo is an active promoter and participant in local, national, and international conservation activities:
- \* Locally the Zoo participates in the trumpeter swan program with the DNR and Hennepin County.
  - \* The Minnesota Zoo is the only zoo in the country to successfully hatch and rear a common loon, Minnesota's state bird.
  - \* The Minnesota Zoo participates in six Species Survival Program Plans and is considered among the world's best in breeding a number of difficult species including clouded leopards, white-cheeked gibbons, Malay chevrotain, pronghorn, and ermine.
  - \* The Zoo is host to the world headquarters of ISIS (International Species Information System), a computer program monitoring captive animal populations world-wide.
  - \* The Zoo is also host to the Captive Breeding Specialist Group, an arm of the International Union for Conservation of Nature and Natural Resources -- Species Survival Commission.

## MINNESOTA ZOO PERMANENT STAFF COMPLEMENT



\* indicates activities with extensive summer season staffing

MINNESOTA ZOOLOGICAL BOARD

**GENERAL DIRECTOR**  
Kathryn R. Roberts, Ph.D

Ginny Bender  
Admin. Support

MINNESOTA ZOO FOUNDATION

**DEVELOPMENT DIRECTOR**  
J. Quinn Tierney

**ANIMAL HEALTH**  
Division Director  
Peregrine Wolff, DVM

Jay Petersen  
Zookeeper

Cheryl Keyler  
A/H Specialist

Andrea Leader  
Zookeeper

Paula Lind  
A/H Specialist

David McRoy  
Medical Records

Kris Petrini, DVM  
Veterinarian

**BIOLOGICAL PROGRAMS**  
Division Director  
Brian Joseph, DVM

Ann Seefeldt  
Admin. Support

**Minnesota Trail**  
Mike DonCarlos

Chris Kline  
Becky Hinwood  
Sandy Koslowski  
Dee Dee Schoeberl  
Janis Stich

**Northern Trail**  
Nick Reindl

Brad Geiszler  
Kathy Anderson  
Cynthia Bjork  
Steve Christenson  
Pam DeCorsey  
Tony Fisher  
Tim Hill  
Jerry Holzer  
Don Rasmussen  
Aimee Sutherland  
Ross Taylor

**Ocean Trail**

Allan Maguire  
John Prevost

**Tropics Trail - Mammals**  
Kathy Castle

Mark Nelson  
Beth Jo Schoeberl  
Jim Johnston  
Tim Judy  
Fred Swengel  
Carol Taylor  
Jody Petersen  
Rebecca Skaine  
Laurie Trechsel

**Tropics Trail - Birds**  
Jim Pichner

Larry Vorwerk  
Diane Fusco  
Jim Gerholdt  
Perry LaBelle

**Exhibits**

Jim Biesinger  
Tom Holloway

**Horticulture**  
Roberta Sladky

Kim Thomas-McCauley  
Vacant  
Vacant

**Grounds**

Kevin Henderson, Lead  
Rick Conrad  
Randy Heinz  
Mike Koslowski  
Doug Pohlen  
Matt Thieding

**Mowing**

(Vacant)  
Roger T. Broz  
(plus student workers)

**CONSERVATION**  
Division Director  
Ronald Tilson, Ph.D

Carole Stead  
Admin. Support

Gerry Binczik  
Conserv. Biol.

Angie Norell  
Librarian

Donna Sandon  
Registrar

**Education**  
Steve Hage, Curator

Pat Cook, Support  
Peg Marquardt, Support

**Bird Show**

Traci Belting  
Steve Estebo  
JoAnna Watson

**Children's Zoo**  
Ken Guillaume

Dee Dee Schadegg  
Christine Simonetti  
John Frawley

**Continuing Educ.**  
Kate Murray

**School Programs**  
Pam O'Brien

Audrey Austin

**Skytrail**  
Beth Heidorn

(P/T Int. Guides)  
Dawn Atwell  
Diane Balcom  
Jennifer Beem  
Ann Benusa  
Brad Blackett  
Mary Bonnabeau  
Laura Emmer  
Lars Erdahl  
Kathy Holzer  
Marsha Knittig  
Steve Thomforde  
Roberta Vorwerk  
Karen Wahlstrom  
Beth Wilson  
(+ student workers)

**ZooArk**  
Jim Streater

Richard Heilman  
DeWaine Tollefsrud

**ZooLab**  
Judy Thompson

Barry Burgstahler  
Jackie Fallon

**OPERATIONS**  
Division Director  
Richard Buske

Jan Huwe  
Admin. Support

**Physical Facilities**  
Dick Dahl, Director

**Building Maintenance**  
Gene Barthel

Rick Andres  
Roger Broz  
Randy Cote  
Mike Gardner  
Ken Henne  
Arlin Long  
John Lott  
Ray Theill  
Vacant

**Monorail Maint.**  
Electrical  
Joel Huelskamp

Mike Blegen  
Ken Evenstad  
Kirk Johnson  
Ray Messier  
Tom Reller

**Engineering**  
Glenn Ronning

Gil Anderson  
Don Appel  
Don Berg  
Greg Bezdicek  
Lowell Dahn  
Ross Lehne  
L. G. McGregor

Tom Schiltz  
Project Coord.

**Purchasing/Receiving/  
Storeroom**  
(Vacant)

Tom Cajacob  
Tom Jeffrey  
John Newbauer  
Sue Spier

**Finance**  
Jeff Higgins

Helen Bohrer  
Dave Lopic  
Val Larson  
Larry Malecha  
Pat Raymond  
Sharon Schaum  
Julie Speiker

**STAFF SERVICES**  
Division Director  
Gloria Heinz

**Personnel**  
Theresa Johnson  
Teri Weitz

**Telecommunications**  
Scott Johnson  
Marita Theis  
Kara McShane  
Lynda Moening

**Volunteers**  
Sheri White

Katie Dahill

**Workers Comp/Health/Safety/  
First Aid Services**  
Dave Ingebritson

Avis Moore  
John Olson  
Chuck Russell  
Ken Weisenburger

**STRATEGIC SERVICES**  
Division Director  
Thomas B. Williams

(Vacant)  
Admin. Support

**Communications Mgr**  
Julie Lee

**Audio-Visual**  
Don Strand  
Dennis Bergman

**Group Sales/Tourism**  
Shirl Olson

Shirley Allstot  
Linda Landwehr

**PR Info Officer**  
(Vacant)

**Special Events**  
Sharon Foster

**Graphics**  
Linda Escher  
Mary Jo Olson

**Project Mgmt/Planning**  
Peter Thomas

Pat Natko  
Admin. Support

(Vacant)  
Associate Development Office

**Membership/ADOPT Coord.**  
Donette Kranz

Data Entry (Vacant)

**Guest Services**  
Lucinda McCandless

Susie Durham  
Jodi Thompson  
Carry Wondercheck  
Hanne Wondercheck  
(+ on-call clerks:)

Chris Ball  
Kristen Bryant  
Matthew Bryant  
Wendy Burwell  
Matthew Carroll  
Laura Foster  
Rob Frerk  
Aaron Godleski  
Lyndee Gronfor

Michelle Hansen  
Vicki Hering  
Tom Hipple  
Kalpana Kothari  
Brian Malecha  
Richard Magno  
Mike Melville  
Jean Sexton  
Debbie Stead

**Building Services**  
Gary Hall

Ralph Bauman  
Trent Beard  
Joe Crawley  
Chris Erickson  
Oran Evans  
Andy Fredlund  
Wes Gran  
Paul Jacobs  
Al Lefebvre

Don Nelson  
Jodi Nelson  
Diane Oleson  
Sandy Peak  
Terry Perron  
Dan Rathburn  
Jeff Smith  
Jeanne Thieding  
Al Westrum  
Steve Wills

**Gift Store**  
(Vacant)

Vincent Aguilar  
Sandra Beiden  
Karen Bentley  
Amy Crosgrove  
Mary Ann Day  
Debbie Donahoe  
Dana Drankwalter  
John Finch  
Robert Garcia  
Ellen Heggen  
Liz Kasner  
Carol Larscheid

Dan Larscheid  
Laura Labukas  
Susan Lee  
Heidi Luukonen  
Sally Russell  
Sally Pieper  
Ken Sachs  
Cathy Schumach  
Mary Skoglund  
Lynn Treadwell  
Alison Voxland  
Tim Wegscheid

8/15/90

2:34 p.m

MINNESOTA ZOOLOGICAL BOARD

Ginny Bender  
Admin. Support

GENERAL DIRECTOR  
Kathryn R. Roberts, Ph.D

MINNESOTA ZOO FOUNDATION

DEVELOPMENT DIR.  
(Vacant)

Pat Natko  
Admin. Support

Annual Fund  
(Vacant)

Membership  
~~Staff Support~~ Vacant

Donette Kranz

ANIMAL HEALTH  
Division Director  
Peregrine Wolff, DVM

Jay Paterson  
Zookeeper

Cheryl Keyler  
A/H Specialist

Andrea Leader  
Zookeeper

Paula Lind  
A/H Specialist

David McRoy  
Medical Records

Kris Patrini, DVM  
Veterinarian

BIOLOGICAL PROGRAMS  
Division Director  
Brian Joseph, DVM

Ann Seefeldt  
Admin. Support

Minnesota Trail  
Mike DonCarlos

Chris Kline  
Becky Hinwood  
Sandy Koslowski  
Dee Dee Schoeberl

Northern Trail  
Nick Reindl

Brad Geiszler  
Kathy Anderson  
Cynthia Bjork  
Steve Christenson  
Pam DeCorsey  
Tony Fisher  
Tim Hill  
Jerry Holzer  
Don Rasmussen  
Aimee Sutherland  
Ross Taylor

Ocean Trail

Allan Maguire  
John Prevost

Tropics Trail - Mammals  
Kathy Castle

Mark Nelson  
Beth Jo Schoeberl  
Jim Johnston  
Tim Judy  
Fred Swengel  
Carol Taylor  
Jody Petersen  
Janis Stich  
Laurie Trechsel

Tropics Trail - Birds  
Jim Pichner

Larry Vorverk  
Diane Fusco  
Jim Gerholdt  
Perry LaBelle

Horticulture  
Robert Sladky

Kim Thomas-McCauley  
Vacant  
Vacant

Grounds

Kevin Henderson, Lead  
Rick Conrad  
Randy Heinz  
Mike Koslowski  
Doug Pohlen  
Matt Thieding

Mowing

Glen Retzlaff, Lead  
Roger T. Broz  
(plus student workers)

CONSERVATION  
Division Director  
Ronald Tilson, Ph.D

Carole Stead  
Admin. Support

Garry Binzlik  
Conserv. Biol.

Angie Norell  
Librarian

Donna Sandon  
Registrar

Interpretive Programs  
Steve Hage, Curator

Pat Cook, Support  
Peg Marquardt, Support

Bird Show

Traci Belting  
Steve Estebo  
JoAnna Watson

Children's Zoo  
Ken Guillaume

Barry Burgstahler  
Dee Dee Schadegg  
John Frawley

School Programs  
Pam O'Brien

Audrey Austin

Skytrail  
Beth Heidorn

(14 p/t Int. Guides)  
Diane Balcom  
Jennifer Beem  
Ann Benusa  
Margret Bonnabeau  
Mary Bonnabeau  
Laura Emmer  
Lars Erdahl  
Kathy Holzer  
Marsha Knittig  
Jennifer Reimer  
Monica Tucker  
Robert Vorkerk  
Karen Wahlstrom  
Beth Wilson

ZooArk

Richard Heilman  
DeWaine Tollefsrud

ZooLab

Dawn Atwell  
Jackie Fallon  
Jim Streater  
Judy Thompson

OPERATIONS  
Division Director  
Richard Buske

Jan Huva  
Admin. Support

Physical Facilities  
Dick Dahl, Director

Building Maintenance  
Gene Barthel

Rick Andres  
Roger Broz  
Randy Cote  
Ken Henne  
Arlin Long  
John Lott  
John Schlagel  
Ray Theill  
Vacant

Monorail Maint.  
Electrical  
Joel Huelskamp

Mike Blegen  
Ken Evenstad  
Kirk Johnson (Electrician)  
Ray Messier  
Tom Reller

Engineering  
Glenn Rinning

Gil Anderson  
Don Appel  
Don Berg  
Greg Bezdicek  
Lowell Dahn  
Ross Lehne  
L. G. McGregor

Tom Schiltz  
Project Coord.

Purchasing/Receiving/  
Storeroom  
(Vacant)

Tom Cajacob  
Tom Jeffrey  
John Neubauer  
Sue Spier

Finance  
Jeff Higgins

Helen Bohrer  
Dave Lopic  
Val Larson  
Larry Malecha  
Pat Raymond  
Sharon Schaum  
Julie Speiker

STAFF SERVICES  
Division Director  
Gloria Heinz

Personnel

Terri Johnson  
Teri Weitz

Telecommunications

Scott Johnson  
Marita Theis  
Lynda Moening  
Dave Herrmann

Volunteers  
Sheri White

Katie Dahill

Workers Comp/Health/Safety/  
First Aid Services  
Dave Ingebritson

Avis Moore  
John Olson  
Chuck Russell

STRATEGIC SERVICES  
Division Director  
Thomas B. Williams

(Vacant)  
Admin. Support

Communications Mgr.  
(Vacant)

Audio-Visual

Don Strand  
Dennis Bergman

Marketing  
Shirl Olson

Shirley Allstot  
Linda Landwehr

Publications Coord.  
(Vacant)

PR Info Officer  
Mike Vinyon

Special Events  
Sharon Foster

Exhibits/Display

Tom Holloway  
Jim Beisinger  
Linda Escher  
Mary Jo Olson

Project Mgmt/Planning  
Peter Thomas

Gift Store  
Jovita Jandric

Susan Lee  
Karen Bentley  
Mary Ann Day  
Debbie Donahoe  
Ellen Heggen  
Sandy Russell  
Sally Pieper  
Cathy Schusacher  
Mary Skoglund  
Lynn Treadwell

Guest Services  
Lucinda McCandless

Susie Durham  
Jodi Thompson  
Cary Wondercheck  
Hanne Wondercheck  
(+ 19 on-call clerks:)

Chris Ball  
Greg Bonsta  
Kristen Bryant  
Matthew Bryant  
Wendy Burwell  
Chris Carpenter  
Matthew Carroll  
Cicely Cohen  
Laura Foster  
Rob Frerk  
Aaron Godleski

Building Services  
Gary Hall

Eric Almqvist  
Ralph Bauman  
Trent Beard  
Joe Crawley  
Chris Erickson  
Oran Evans  
Bill Foster  
Andy Fredlund  
Wes Gran  
Paul Jacobs  
Al Lafabvre

Lyndee Gronfor  
Michelle Hansen  
Vicki Hering  
Tom Hipple  
Kalpana Kothari  
Brian Malecha  
Richard Magno  
Mike Melville  
Jean Sexton  
Debbie Stead

Don Nelson  
Jodi Nelson  
Jim Oster  
Sandy Peak  
Terry Perron  
Dan Rathbun  
Jeff Smith  
Jeanne Thieding  
Al Westrum  
Steve Willis

Exhibits

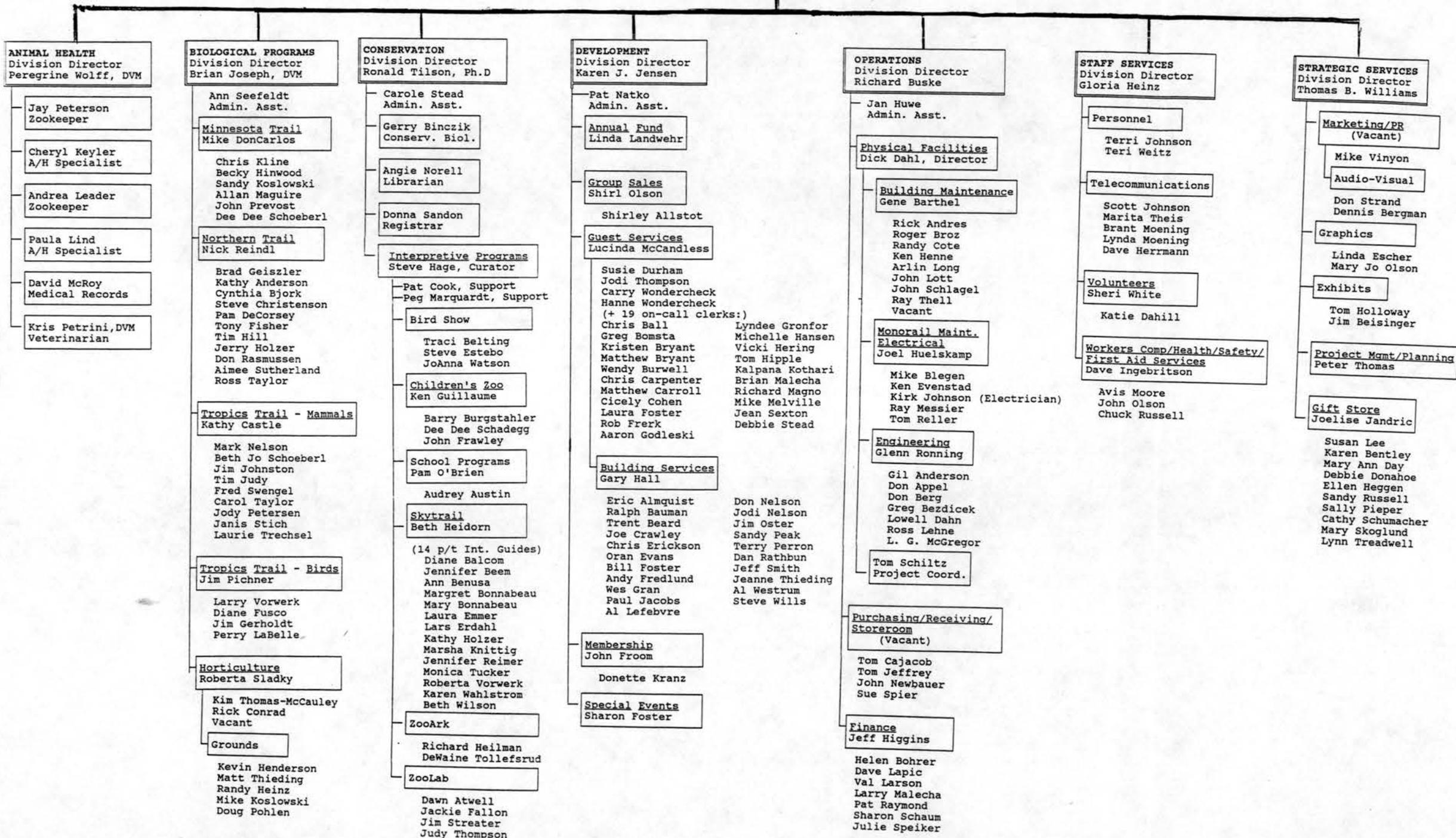
Graphics

4 Super

3/30/90

Ginny Bender  
Admin. Asst.GENERAL DIRECTOR  
Kathryn R. Roberts, Ph.D

MINNESOTA ZOO FOUNDATION



<u>Last Name</u>	<u>First Name</u>	<u>Title</u>	<u>FT or PT</u>	<u>Salary</u>	<u>W/Fringes</u>
Allstot	Shirley	Group Sales Assistant	PT		
Anderson	Gil	Stationary Engineer	FT	\$27,789	\$33,948
	Kathryn	Zoo Keeper	FT	\$20,717	\$24,485
Andres	Richard	Laborer 2	FT	\$24,752	\$28,983
Appel	Donald	Stationary Engineer	FT	\$27,789	\$33,948
Austin	Audrey	School Group Scheduler	PT		
Balcom	Diane	Monorail Guide	PT		
Barthel	Gene	Building Maintenance Supervisor	FT	\$35,173	\$42,180
Belting	Traci	Interpretive Naturalist Aide	FT	\$20,030	\$23,719
Bender	Virginia	Executive Secretary	FT	\$29,994	\$36,406
Berg	Donald	Stationary Engineer	FT	\$27,789	\$33,948
Bergman	Dennis	Electronics Technician	FT	\$29,377	\$35,455
Bezdicek	Greg	Stationary Engineer	FT	\$27,789	\$33,789
Biesinger	James	Exhibit Specialist	FT	\$27,539	\$33,670
Binczik	Gerald	Conservation Biologist	FT	\$25,230	\$29,516
Blegen	Michael	Monorail Maintenance Worker lead	FT	\$28,621	\$34,875
Bohrer	Helen	Cash Control Clerk	PT		
Bonnabeau	Mary	Monorail Guide	PT		
Brama	Lydia	Zoo Keeper Trainee	FT	\$18,113	\$23,812
Broz	Roger	Garage Foreman	FT	\$29,682	\$36,058
Burgstahler	Barry	Zoo Keeper	FT	\$21,882	\$25,779
Buske	Richard	Assistant Director/Operations	FT	\$50,086	\$58,491
Cajacob	Thomas	Mechanical Stock Clerk Chief	FT	\$24,502	\$30,284
Castle	Kathy	Zoo Animal Curator	FT	\$32,697	\$37,841
Christenson	Stephen	Zoo Keeper	FT	\$23,816	\$29,519
Christian	Randall	Laborer 2	FT	\$24,752	\$27,593
Conrad	Richard	Groundskeeper Senior	FT	\$22,235	\$26,177
Cook	Pat	Education Secretary	PT		
Cote	Randy	Carpenter	FT	\$27,789	\$33,949
Crawley	Joseph	General Maintenance Worker	FT	\$20,405	\$24,137
Dahill	Katie	Volunteer Coordinator Assistant	FT	\$19,488	\$23,070
Dahl	Richard	Physical Plant Director	FT	\$43,950	\$51,965
Dahn	Lowell	Stationary Engineer	FT	\$27,789	\$33,948
Day	Mary Ann	Gift Store Clerk	PT		
Donahoe	Debra	Gift Store Clerk	PT		
Dowse	Marcy	Public Relations/Marketing Manager	FT	\$39,354	\$46,840
Durham	Susan	Admissions Clerk	PT		
Escher	Linda	Graphic Arts Specialist	FT	\$28,308	\$33,100
Estebo	Steven	Zoo Keeper	FT	\$22,526	\$28,081
Evans	Oran	General Maintenance Worker	FT	\$20,405	\$25,716
Evanstad	Ken	Monorail Maintenance Worker	FT	\$26,998	\$33,067
Fischer	Tony	Zoo Keeper	FT	\$20,716	\$25,905
Foster	Sharon	Special Events Manager	FT	\$29,994	\$36,406
Froom	John	Membership Director	FT	\$26,125	\$30,513
Fusco	Diane	Zoo Keeper	FT	\$23,816	\$27,940
Geiszler	Brad	Zoologist Assistant	FT	\$27,539	\$32,090
Gerholdt	James	Zoo Keeper	FT	\$23,816	\$29,519
Gran	Wesley	General Maintenance Worker	FT	\$16,474	\$21,334
Guillaume	Kenneth	Zoologist Assistant	FT	\$27,539	\$32,090
Hage	Steven	Interpretive Services Curator	FT	\$33,904	\$39,185
Hall	Gary	Building Services Supervisor	FT	\$30,035	\$35,452
Heidorn	Elizabeth	Monorail Driver Supervisor	FT	\$24,315	\$28,496
Heinz	Gloria	Personnel Director	FT	\$43,950	\$51,964
	Randy	Laborer	FT	\$24,066	\$28,218

<u>Last Name</u>	<u>First Name</u>	<u>Title</u>	<u>FT or PT</u>	<u>Salary</u>	<u>W/Fringes</u>
Henderson	Kevin	Laborer 2	FT	\$24,752	\$30,558
Henne	Kenneth	Welder	FT	\$27,789	\$33,948
Higgins	Jeffrey	Finance Director	FT	\$32,697	\$39,261
Hill	Timothy	Zoo Keeper	FT	\$19,032	\$21,217
Holloway	Thomas	Exhibit Specialist	FT	\$30,805	\$37,310
Holzer	Gerald	Zoo Keeper	PT		
	Kathy	Monorail Guide	PT		
Huelskamp	Joel	Electrician Supervisor	FT	\$31,428	\$38,006
Huwe	Janice	Operations Secretary	FT	\$26,998	\$31,487
Jandric	Joelise	Gift Store Manager	Ft	\$26,208	\$30,606
Jeffrey	Thomas	Automobile Drive	FT	\$17,680	\$21,258
Jensen	Karen J.	Assistant Director/Development	FT	\$45,926	\$53,962
Johnson	Jim	General Repair Worker	FT	\$25,480	\$31,374
	Scott	Switchboard Operator	FT	\$21,611	\$25,482
	Terri	Personnel Assistant	FT	\$26,000	\$30,374
Johnston	James	Zoo Keeper	FT	\$19,552	\$24,761
Judy	Timothy	Zoo Keeper	FT	\$23,816	\$27,940
Keyler	Cheryl	Animal Health Technician	PT		
Kline	Chjris	Zoo Keeper	FT	\$20,716	\$26,064
Koslowski	Sandy	Zoo Keeper	FT	\$20,717	\$26,064
Kranz	Donette	Membership Clerk	PT		
Landwehr	Linda	ADOPT Coordinator	PT		
Lapic	David	Account Clerk	FT	\$22,235	\$26,177
Larson	Valerie	Cash Control Clerk	PT		
Leader	Andrea	Zoo Keeper	FT	\$23,816	\$27,940
Lee	Susan	Gift Store Asst. Manager	FT	\$20,030	\$25,299
Lefebvre	Albert	General Maintenance Worker	FT	\$20,405	\$25,716
Lehne	Ross	Stationary Engineer	FT	\$27,789	\$33,948
Lind	Paula	Animal Health Specialist	FT	\$29,928	\$37,177
Long	Arlin	Plumber	FT	\$27,789	\$33,948
Lott,	John	Painter	FT	\$27,789	\$33,943
Maguire	Allan	Zoologist Assistant	FT	\$26,000	\$31,954
Malecha	Larry	Account Clerk	FT	\$25,480	\$31,374
Marquardt	Margaret	Education Secretary	PT		
McCandless	Lucinda	Guest Services Manager	FT	\$28,142	\$34,342
McRoy	David	Medical Records Specialist	FT	\$20,717	\$26,064
Messier	Raymond	Monorail Maintenance Worker	FT	\$26,998	\$33,067
Natko	Patricia	Administrative Assistant	FT	\$26,998	\$31,647
Nelson	Don	General Maintenance Worker	FT	\$18,782	\$22,328
	Mark	Zoologist Assistant	FT	\$27,539	\$33,669
Newbauer	John	Mechanical Stock Clerk	FT	\$19,448	\$24,650
Norell	Angela	Librarian	PT		
O'Brien	Pamela	Interpretive Naturalist	FT	\$27,995	\$32,713
Olson	Mary Jo	Graphic Arts Specialist	FT	\$26,788	\$31,254
	Shelly	Gift Store Clerk	PT		
Olson,	Shirley	Group Sales/Tourism Manager	FT	\$24,190	\$28,357
Petersen	Jay	Zoo Keeper	FT	\$27,539	\$33,669
	Jody	Zoo Keeper	PT		
Petrini, DVM	Kris	Veterinarian	FT	\$36,400	\$40,578
Pichner	Jimmy	Zoo Animal Curator	FT	\$32,697	\$39,420
Pohlen	Doug	Laborer 2	FT	\$24,065	\$29,797
Prevost	John	Zoo Keeper	FT	\$21,882	\$27,363
Rasmussen	Don	Zoo Keeper	FT	\$23,816	\$29,519
Rathbun	Dan	General Maintenance Worker	FT	\$20,405	\$25,711

<u>Last Name</u>	<u>First Name</u>	<u>Title</u>	<u>FT or PT</u>	<u>Salary</u>	<u>W/Fringes</u>
Reindl	Nicholas	Zoo Animal Curator	FT	\$36,504	\$43,664
Reller	Thomas	Monorail Maintenance Worker	FT	\$26,998	\$33,067
Roberts	Kathryn	General Director	FT	\$67,500	\$77,713
Ronning	Glen	Chief Engineer	FT	\$33,904	\$40,606
Russell	Charles	First Aid Services Asst.	PT		
Sandon	Donna	Registrar	FT	\$27,539	\$32,090
Schadegg	Dedrae	Zoo Keeper	FT	\$20,114	\$25,392
Schaum	Sharon	Account Clerk	FT	\$21,049	\$26,276
Schiltz	Thomas	Building Maintenance Coordinator	FT	\$31,637	\$38,237
Schlagel	John	General Repair Worker	FT	\$25,480	\$31,374
Schmidt	Konrad	Zoo Keeper	FT	\$19,032	\$20,475
Schoeberl	Beth Jo	Zoo Keeper	FT	\$21,882	\$27,363
	Deborah	Zoo Keeper	FT	\$23,171	\$28,800
Schumacher	Catherine	Gift Store Clerk	PT		
Seefeldt	Ann	Biological Programs Secretary	FT	\$20,530	\$24,276
Skoglund	Mary	Gift Store Clerk	PT		
Sladky	Roberta	Zoo Horticulture Curator	PT	\$29,245	\$33,992
Spier	Susan	Purchasing Agent	FT	\$26,998	\$33,067
Stead	Carole	Conservation Secretary	FT	\$24,190	\$29,777
Stich	Janis	Zoo Keeper	FT	\$20,114	\$23,812
Strand	Don	Audio Visual Manager	PT		
Streater	James	Interpretive Naturalist	FT	\$25,230	\$31,906
Sutherland	Aimee	Zoo Keeper	PT		
Swengel	Frederick	Zoo Keeper	FT	\$23,816	\$27,940
Taylor	Carol	Zoo Keeper	FT	\$23,816	\$27,940
Thell	Raymond	Carpenter	FT	\$27,789	\$32,368
Thieding	Matthew	Groundskeeper	FT	\$18,491	\$23,424
Thomas	Peter	Capital Projects Director	FT	\$33,509	\$38,745
Thomas-McCauley	Kim	Horticulturist	FT	\$23,587	\$27,856
Thompson	Judy	Zoologist Assistant	FT	\$23,171	\$27,221
Tilson	Ron	Assistant Director/Conservation	FT	\$43,680	\$52,975
Trechsel	Laura	Zoo Keeper	FT	\$19,552	\$23,186
Vinyon	Michael	Public Relations Assistant	FT	\$18,969	\$21,839
Vorwerk	Larry	Zoologist Assistant	FT	\$27,539	\$33,669
	Roberta	Monorail Guide	PT		
Watson	Joanna	Zoo Keeper	FT	\$19,032	\$20,474
Weitz	Teri	Personnel/Payroll Assistant	FT	\$24,502	\$30,125
White	Cheryl	Volunteer Services Coordinator	FT	\$26,124	\$30,513
Williams	Thomas	Assistant Director/Strategic Services	FT	\$39,832	\$45,794
Wilson	Beth	Monorail Guide	PT		
	Elizabeth	Monorail Interpretive Aide	PT		
Wolff, DVM	Peregrine	Assistant Director/Animal Health	FT	\$37,898	\$45,217

**CURRICULUM VITAE**

- A. General Director - Kathryn R. Roberts, Ph.D.
- B. Director, Animal Health - Peregrine Wolff, DVM
- C. Director, Biological Programs - Brian E. Joseph, DVM
- D. Director, Conservation - Ronald L. Tilson, Ph.D.
- E. Director, Operations - Richard C. Buske
- F. Director, Strategic Services - Thomas B. Williams
- G. Curator, Horticulture - Roberta Sladky
- H. Curator, Interpretive Programs - Steven R. Hage
- I. Curator, Minnesota Trail - Michael W. DonCarlos
- J. Curator, Northern Trail - Nicolas J. Reindl
- K. Curator, Tropics Birds - Jimmy Pichner
- L. Curator, Tropics Mammals - Katherine Castle

**KATHRYN R. ROBERTS**  
Minnesota Zoological Garden  
Apple Valley, MN 55124  
Work: (612) 431-9333

## EDUCATION

1976-1978 Ph.D., University of Minnesota, Educational Administration  
1973-19975 M.S., Mankato State University, Special Education  
1969-1973 B.A., University of Minnesota, Psychology

## EMPLOYMENT HISTORY

**Current**                    General Director  
MINNESOTA ZOOLOGICAL GARDEN  
Apple Valley, Minnesota

Responsible for the planning, organization and management of the Minnesota Zoo, with a \$10 million operating budget, 150 full-time employees, and serving approximately 900,000 visitors annually.

**1985-1986**                Director  
MINNESOTA OFFICE OF FULL PRODUCTIVITY AND OPPORTUNITY

Responsible for coordination of all income maintenance, support services, and jobs and training programs in the state. Goal was to reduce unemployment while also reducing the number of persons receiving public assistance.

**1984-1985**                Assistant Commissioner  
MINNESOTA DEPARTMENT OF ECONOMIC SECURITY

Managed all administrative and technical staff (225) and services to department of 2,500 employees. Responsibilities included directing in-house information management operation, controlling \$800 million budget, and managing the research function.

**1984**                        Acting Commissioner  
MINNESOTA DEPARTMENT OF HUMAN RIGHTS

Responsible for reorganization of department and reduction of backlogged case load from 3,000 to 1,400.

**1979-1984**                Director, Management Analysis Division  
MINNESOTA DEPARTMENT OF ADMINISTRATION

Developed in-house management consultant capabilities in executive branch of Minnesota state government. Directed major management audits in state agencies. Accepted recommendations led to significant operational improvements. Administered State Productivity Improvement Project resulting in training program for participative management techniques and innovative approaches to manage declining resources.

1977-1979

Coordinator, Federal Research and Development Grant  
MINNESOTA DEPARTMENT OF PUBLIC WELFARE

Designed and implemented state-wide management information system to monitor and influence deinstitutionalization process. Created training materials to enable implementation of individual rehabilitation plans. Developed and pilot-tested model standards for residential care providers.

1974-1977

Staff, Technical Assistance Project  
MINNESOTA DEPARTMENT OF PUBLIC WELFARE

Wrote self instructing manual to develop residential care facilities. Assisted all residential care providers in compliance with state and federal mandates. Developed and implemented needs assessment instrument for twenty-seven state mental health centers.

1972-1973

Psychological Research Assistant  
HONEYWELL, INC.

Assisted in design and conduct of studies of human cognitive behavior, concept formation, and development of aids for human decision makers.

**RELATED EXPERIENCE**

1982

Program for Senior Managers in Government  
John F. Kennedy School of Government, Harvard University

1980

Fellow, Education Leadership Program  
George Washington University

1979

Visiting professor - Southern Illinois University  
Consultant to Massachusetts Department of Mental Hygiene

1977

Conducted management seminars; Rensselaer Polytechnic Institute

**PROFESSIONAL ASSOCIATIONS**

Professional Fellow, American Association of Zoological Parks and Aquariums and member of Bylaws Committee

Member of Captive Breeding Specialist Group (CBSG) and chair of fund raising committee

Member of Board of Directors of International Species Inventory System (ISIS) and Treasurer

President, Minnesota Zoological Garden Foundation

References and Publications available upon request

PEREGRINE LEE WOLFF

Institutional Affiliation:

Division of Animal Health  
Minnesota Zoological Garden  
Apple Valley, MN 55124

Title:

Director of Animal Health  
Telephone: (612) 431-9361

Function/Duties:

Senior Staff Veterinarian, Minnesota Zoological Garden 1/89-Present

This position reports to the General Director of the Minnesota Zoo. It is accountable for the supervision of six full-time employees and for the clinical care and preventative medicine programs for an animal collection of 1400 specimens. Also responsible for conducting and assisting in research and conservation projects in conjunction with the Divisions of Animal Programs and Conservation.

Education:

Middlebury College 1976-1977  
University of Vermont 1977-1979  
New York State College of Veterinary Medicine, D.V.M., 1984.

Professional Experience:

11/89 - Present Assistant Clinical Professor, University of Minnesota,  
Veterinary College, Small Animal and Large Animal Clinical  
Sciences

01/86 - 12/88 Associate Veterinarian, Lincoln Park Zoo, Chicago, IL

06/84 - 12/85 Veterinary Intern, Lincoln Park Zoo, Chicago, IL

01/84 - 03/84 Research Extern, San Diego Zoo, San Diego, CA

05/83 - 08/83 Veterinary Extern, Lincoln Park Zoo, Chicago, IL

03/80 - 08/80 Husbandry and Management Training Program - Student Intern,  
Jersey Wildlife Preservation Trust, Jersey, Channel Islands

Publications:

- Meehan, T.P., P.L. Wolff. Management of traumatic injuries in pediatric great apes. (1989) Proceedings of the Association of Zoo Veterinarians, Greensboro, N.C. 191-192.
- Baer, D.J., T.P. Meehan, W.V. Rumpler, P.L. Wolff, et al. Methods of estimating body composition with preliminary observations on the relationship between obesity and fertility. 1989. Proceedings of Fertility in Great Apes, Atlanta, Georgia. (In press.)
- Wolff, P.L., Selected medical aspects of the spectacled bear, Tremarctos ornatus. 1988. Proceedings from the First International Symposium on the Spectacled Bear. Chicago Park District Press. 313-318.
- Hruban, Z., W.E. Carter, T.P. Meehan, P.L. Wolff, W.A. Franklin, and G. Seymour. (1988) Retroperitoneal paraganglioma in a tiger (Panthera tigris). J. Zoo Anim. Med. 19(4):231-234.
- Wolff, P.L., T.P. Meehan, E.J. Basgall, G.P. Allen, and J.P. Sundberg. Abortion and perinatal foal mortality associated with equine herpes virus. Type 1 in a herd of Grevy's zebra. 1986. JAVMA, 189:1185-1186.
- Wolff, P.L., J.M. Garden, R.M. Marder, D.P. Rosenberg, and J.P. Sundberg. Pemphigus vulgaris in a pigtail macaque. 1986. JAVMA 189:1220-1221, 1986.
- Meehan, T.P., P.L. Wolff, R.P. Kotz, and J.P. Foerner. Molar extraction in a Bactrian camel. 1986. Proceedings from the Exotic Animal Dentistry Conference, Milwaukee, WI, 88.
- Hruban, Z., T.P. Meehan, P.L. Wolff, R.L. Wollman, and S. Glagov. Aortic dissection in a lowland gorilla. 1986. J Med Prim, 15:287-293.
- Hruban, Z., T.P. Meehan, R.L. Wollman, S. Glagov, P.L. Wolff, and J. Pond. Diffuse nodular hyperplasia and fibrosis of the liver in lead-poisoned mandrills. 1986. J Med Prim 15:245-248.
- Hruban, Z., W.E. Carter, T.P. Meehan, P.L. Wolff, W.A. Franklin, and S. Glagov (1988) Complex mammary carcinoma in a tiger. J Zoo Anim. Med. 19(4):226-230.
- Hruban, Z., W.E. Carter, T.P. Meehan, P.L. Wolff, and S. Glagov. (1988) Lipid in renal tubules of two tigers. Manuscript in preparation.
- Miller, A.M., L.A. Johnston Ph.D, U.S. Seal Ph.D., D.L. Armstrong DVM, R.L. Tilson Ph.D., P.L. Wolff DVM, K.R. Petrini DVM, L.G. Simmons DVM, T. Gross Ph.D., and D.E. Wildt Ph.D. 1989. Hormonal Induction of Ovarian Activity and In Vitro Fertilization in the Tiger (Panthera tigris). Manuscript in preparation.
- Lind, P.J., P.L. Wolff, K.R. Petrini, C.W. Keyler, D.E. Olson and P.T. Redig (1990) Morphology of the Eosinophil in Selected Avian Species; Raptors Part I. Manuscript in Preparation.

Professional Memberships and Honorary Society:

American Association of Zoo Veterinarians  
11/88 - Present Co-chair Infectious Disease Committee  
American Association of Zoological Parks and Aquariums  
Association of Primate Veterinarians  
Association of Avian Veterinarians  
American Veterinary Medical Association  
Phi Zeta

Teaching Experience:

University of Minnesota, 1990  
Large Animal Clinical Sciences Course #5275, Medicine of Zoo Animals and Non-  
domestic Pets.

Brian E. Joseph, DVM  
12305 Johnny Cake Ridge Road  
Apple Valley, Minnesota 55124  
(612) 432-2140

PERSONAL

Birthdate: 9-5-51                      Married  
5'8"            180#                      Excellent Health

EDUCATION

Southwestern College, Chula Vista, Calif.,  
A. A. Degree - General Studies - June,  
1974. Major: Biology

San Diego State University, San Diego, Calif.,  
B. S. Degree - High Honors, distinction  
in Zoology, December 1977.

San Diego State University, San Diego,  
Calif., Graduate Division. Major:  
Biology.

University of California, School of  
Veterinary Medicine, Davis, Calif.,  
Doctor of Veterinary Medicine, June,  
1984.

EXTRACURRICULAR  
EDUCATION

International Wilderness Leadership School,  
Republic of South Africa, August, 1975.

Sea World, Inc., Veterinary Preceptorship,  
San Diego, Calif., September, 1982.

National Zoological Park, Veterinary  
Preceptorship, February-March, 1984.

PROFESSIONAL  
MEMBERSHIPS

American Association of Zoological Parks and  
Aquariums  
American Association of Laboratory Science  
American Association of Zoo Veterinarians  
American Veterinary Medical Association  
American Avian Veterinarians  
Association of Primate Veterinarians  
International Association of Aquatic Animal  
Medicine  
Wildlife Disease Association

EXPERIENCE

Jan, 1990 -  
present

MINNESOTA ZOOLOGICAL GARDEN, Apple Valley, Minnesota  
Comprehensive collection of captive animals

Position: Director of Biological Programs

Responsibilities:

- ..Management of husbandry, environment, propagation and composition of a large zoological collection.
- ..Management of botanical collection and zoological institution grounds.
- ..Oversight of support budget for maintenance of zoological collection, botanical collection and grounds.
- ..Supervision of staff associated with zoological collection, botanical collection and grounds.
- ..Veterinary support of collection on an as-needed basis.

Oct, 1989 -  
present

JOHN G. SHEDD AQUARIUM, Chicago, Illinois  
Comprehensive collection of aquatic animals

Position: Consulting Veterinarian

Responsibilities:

- .. Management of husbandry, environment and medical care of captive marine animals.
- .. Evaluation of present facilities and assistance in design of future facilities.
- .. Education of staff through presentation of training seminars.

Oct, 1988 -  
Dec, 1989

CHICAGO ZOOLOGICAL SOCIETY, Brookfield, Illinois  
Comprehensive collection of captive vertebrates

Position: Acting Chief Veterinarian

Responsibilities:

- ..Supervision of veterinary programs: including preventive medicine, clinical medicine and gross pathology.
- ..Supervision of staff of 9 full time employees.
- ..Education of staff through presentation of training seminars.
- ..Assistance with management of animal collection.
- ..Development and administration of \$465,000 budget.
- ..Preparation of program statement for animal health.
- ..Preparation of proposal for construction of new veterinary hospital.

May, 1988 -  
Oct, 1989

MINNESOTA ZOOLOGICAL GARDEN, Apple Valley, Minnesota  
Comprehensive collection of captive animals

Position: Marine Mammal Consulting Veterinarian

Responsibilities:

- .. Management of husbandry, environment and medical care of captive marine mammals.
- .. Evaluation of present facilities and assistance in design of future facilities.
- .. Education of staff through presentation of training seminars.

Sept, 1987 -  
Sept, 1988

CHICAGO ZOOLOGICAL SOCIETY, Brookfield, Illinois  
Comprehensive collection of captive vertebrates

Position: Staff Veterinarian

Responsibilities:

- .. Examination, diagnosis, restraint, and treatment of mammals, birds, reptiles.
- .. Preventative medicine including husbandry quality control, environmental quality control, and laboratory operation.
- .. Postmortem examinations.
- .. Supervision of externship program.
- .. Supervision of keeper training programs.

July, 1985 -  
Aug, 1987

SEA WORLD, Inc., San Diego, California  
Oceanarium

Position: Resident Veterinarian

Responsibilities:

- .. Examination, diagnosis, and treatment of marine mammals, birds, and fish.
- .. Clinical and field research and publication.
- .. Preventative medicine including: husbandry, water quality, parasite control programs.
- .. Transport of marine mammals.
- .. Postmortem examination of all mortalities.
- .. Supervision of externship program.

July, 1984 -  
June, 1985

SEA WORLD, INC., San Diego, California  
Oceanarium.

Position: Veterinary Medical Intern

Responsibilities:

- .. Examination, diagnosis, and treatment of mammals, birds and fish under the direction of senior veterinarian.
- .. Clinical research and publication under the direction of senior veterinarian.
- .. Preventative medicine including: husbandry, water quality, parasite control programs under the direction of senior veterinarian.

July, 1983 -  
Sept, 1983

LOS ANGELES ZOO, Los Angeles, California  
Comprehensive collection of captive vertebrates

Position: Veterinary Assistant: ten week paid training program in zoological medicine.

Responsibilities:

- .. Manual and chemical restraint of a wide variety of vertebrates.
- .. Examination, venipuncture, diagnosis and treatment of non-domestic animals.
- .. Extensive use of immobilization equipment.

Nov, 1980 -  
June, 1983

CALIFORNIA PRIMATE RESEARCH CENTER, Davis,  
California  
Research center housing 2500 non-human primates.

Position: Veterinary Technician: two year program in primate and laboratory animal medicine

Responsibilities:

- .. Administration of treatments to macaques, titis, squirrel monkeys and baboons, including oral, nasogastric, orogastric, intravenous, intramuscular, and intraperitoneal routes.
- .. Examination, venipuncture, radiography and diagnosis of animals presented to therapeutics staff.
- .. Anesthesia and restraint of non-human primates, including hand-capture.

- .. Administration of emergency care in the absence of the veterinary staff.
- .. Participation in biomedical research.

Feb., 1979 -  
July, 1980

SEA WORLD, INC., San Diego, California  
Oceanarium.

Position: Animal Care Specialist

Responsibilities:

- .. Care and feeding of a wide variety of marine mammals including pinnipeds, cetaceans and mustelids.
- .. Administration of medications and treatments under veterinary direction.
- .. Restraint, capture, handling of marine mammals.

Aug, 1978 -  
Sep, 1978

DUKE UNIVERSITY CENTER FOR THE STUDY OF  
PRIMATE BIOLOGY AND HISTORY, Durham, North  
Carolina.  
Captive prosimian research and propagation.

Position: Facility Manager

Responsibilities:

- .. Manage health, husbandry, and breeding of over three hundred prosimians.
- .. Supervision of staff.

May, 1973 -  
Aug, 1978

SAN DIEGO ZOOLOGICAL GARDEN, San Diego,  
California.  
Comprehensive collection of captive animals.

Position: Senior Mammal Keeper

Responsibilities:

- .. Care and feeding of a variety of mammals.
- .. Assist in capture, restraint, and administration of treatments.
- .. Maintain accurate records on health and behavior.

PUBLICATIONS

Joseph, B. E. Primate Research. CALIFORNIA  
VETERINARIAN, 6, June, 1983.

Joseph, B. E. California sea lions. ZOO NOZ  
57:9-11, 1984.

Joseph, B. E.; Asper, E. D.; Antrim, J. E.  
Marine mammal transport. in Dierauf, L. A.  
(ed.) The handbook of marine mammal medicine:  
clinical practicalities. Boca Raton, Florida,  
CRC Press. (in press)

Joseph, B. E.; Antrim, J. E.; Cornell, L. H.  
Commerson's dolphin (Cephalorhynchus  
commersoni): a discussion of the first  
successful captive birth. ZOO BIOLOGY 6:69-77,  
1987.

Joseph, B. E.; Cornell, L. H. The use of  
meperidine hydrochloride for chemical restraint  
in certain cetaceans and pinnipeds. JOURNAL OF  
WILDLIFE DISEASES 24:691-694, 1988.

Joseph, B. E.; Cornell, L. H. Lymphosarcoma  
in a captive harbor seal (Phoca vitulina).  
(in preparation)

Joseph, B. E.; Cornell, L. H.; Migaki, G.  
Metastatic squamous cell carcinoma in a  
California sea lion (Zalophus californianus)  
JOURNAL OF WILDLIFE DISEASE 22:281-283, 1986.

Joseph, B. E.; Cornell, L. H.; Migaki, G.;  
Griner, L. Pulmonary aspergillosis in three  
species of dolphins. ZOO BIOLOGY 5:301-308,  
1986.

Joseph, B. E.; Cornell, L. H.; Osborn, K. G.  
The occurrence of barnacles on the Northern  
elephant seal (Mirounga angustirostris).  
JOURNAL OF MAMMALOGY 67:772, 1986.

Joseph, B. E.; Cornell, L. H.; Osborn, K. G.  
A ringed seal (Phoca hispida) in Southern  
California. (in preparation)

Joseph, B. C.; Cornell, L. H.; Williams, T. D.  
Chemical sedation in sea otters, Enhydra  
lutris. JOURNAL OF ZOO ANIMAL MEDICINE 18:7-13,  
1987.

Joseph, B. E.; Cornell, L. H.; Williams, T. D.  
Chemical sedation in sea otters. SEA OTTER

OIL SPILL MITIGATION STUDY, Minerals Management Service, U.S. Department of Interior, 25-33, 1986.

Joseph, B. E.; Spraker, T.; Migaki, G. Bacterial endocarditis in a northern sea otter (Enhydra lutris). JOURNAL OF ZOO ANIMAL MEDICINE. (in press)

Joseph, B. E.; Wilson, D. W.; Henrickson, R. V.; Robinson, P. T.; Benirschke, K. Treatment of pulmonary acariasis in rhesus macaques with ivermectin. LABORATORY ANIMAL SCIENCE 34:360-364, 1984.

Cornell, L. H.; Asper, E. D.; Duffield, D. A.; Odell, D. K.; Joseph, B. E.; Stark, B.; Perry, K. Hematology and serum chemistry values in the bottlenose dolphin (Tursiops truncatus). In The bottlenose dolphin (S. Leatherwood and R. Reeves (eds.)). (in press.)

Cornell, L. H.; Duffield, D. A.; Joseph, B. E.; Stark, B. Hematology and serum chemistry values in the beluga whale Delphinapterus leucas. JOURNAL OF WILDLIFE DISEASES 24:220-224, 1988.

Cornell, L. H.; Joseph, B. E.; A brief discussion of morbidity and mortality associated with the sea otter oil spill mitigation study. SEA OTTER OIL SPILL MITIGATION STUDY, U. S. Department of the Interior, Minerals Management Service, 179-196, 1986.

Cornell, L. H.; Joseph, B. E.; Antrim, J. E. Anesthesia and tusk extraction in walrus. JOURNAL OF ZOO ANIMAL MEDICINE 18:3-6, 1987.

Joseph, S. A.; Antrim, J. E.; Joseph, B. E.; Cornell, L. H. Postpartum interactions between adult female Commerson's dolphin (Cephalorhynchus commersonii) in captivity. (in preparation)

Thomas, J. A.; Cornell, L. H.; Joseph, B. E.; Williams, T. D. An implanted transponder chip used as a tag for sea otters (Enhydra lutris). MARINE MAMMAL SCIENCE 3:271-274, 1987.

Walker, L. A.; Cornell, L. H.; Czekala, N. M.; Dargen, C. M.; Joseph, B. E.; Hsueh, J. W; Lasley, B. L. Urinary concentrations of ovarian steroid hormone metabolites and bioactive follicle stimulating hormone in killer whales (Orcinus orca) during ovarian cycles and pregnancy. BIOLOGY OF REPRODUCTION 39:1013-1020, 1988.

Williams, T. D.; Cornell, L. H.; Joseph, B. E.; Golden, B. J. Sea otter transmitter implantation surgery, SEA OTTER OIL SPILL MITIGATION STUDY, Minerals Management Service, U. S. Department of the Interior, 174-178, 1986.

#### PRESENTATIONS

Joseph, B. E. Common avian parasites. Butte County Bird Club, Chico, California, May, 1983.

Joseph, B. E. Pulmonary acariasis: a review of disease transmission, pathology, diagnosis, and treatment. American Association of Zoo Veterinarians Annual Conference, Louisville, Kentucky, October, 1984.

Joseph, B. E. Acclimatization of marine mammals. American College of Veterinary Surgeons Annual Conference, San Diego, California, February 7, 1984.

Joseph, B. E. Keeping marine mammals healthy. American Association of Zookeepers, Los Angeles Zoo Chapter, Symposium on Marine Mammals, May 25, 1985.

Joseph, B. E. A discussion of squamous cell carcinoma in marine mammals including two case reports. American Association of Zoo Veterinarians Annual Conference, Phoenix, Arizona, October, 1985.

Joseph, B. E. Marine mammal medicine, animal health technology course in zoological medicine. Mesa Community College, November, 1986.

Joseph, B. E. Marine mammal medicine. Student American Veterinary Medical Association Annual Conference, Davis, California, March, 1988.

Joseph, B. E. Marine mammal nutrition and husbandry. Student chapter, American Association of Zoo Veterinarians, University of Illinois, Champaign, Illinois, November, 1988.

Joseph, B. E. Diseases of marine mammals. Student chapter, American Association of Zoo Veterinarians, University of California, Davis, California, May, 1989.

Joseph, B. E. A brief overview of the successful maintenance of marine mammals in zoological environments. Zoo and Wildlife Disease Club, Purdue University, School of Veterinary Medicine, John G. Shedd Aquarium, February 18, 1990.

Joseph, B. E. Current threats to small cetaceans. Department of Geology, University of Minnesota, Minneapolis, Minnesota, March 12, 1990.

Joseph, B. E. Current threats to small cetaceans. Zoo and Wildlife Medicine Club, University of Wisconsin, School of Veterinary Medicine, Madison, Wisconsin, April 25, 1990.

Joseph, B. E. A brief overview of marine mammal medicine within zoological environments. Zoo and Wildlife Medicine Club, University of Wisconsin, School of Veterinary Medicine, Madison, Wisconsin, April 25, 1990.

Joseph, B. E.; Cornell, L. H. Commerson's dolphin (Cephalorhynchus comersonii): a discussion of the first live birth within a marine zoological park. American Association of Zoo Veterinarians Annual Conference, Phoenix, Arizona, October, 1985.

Joseph, B. E.; Cornell, L. H. The use of meperidine hydrochloride for the sedation of certain cetaceans and pinnipeds. American Association of Zoo Veterinarians Annual Conference, Honolulu, Hawaii, September, 1987.

Joseph, B. E.; Hogan, H. Efficacy and safety of ivermectin treatment for scaly leg mite infestation in parakeets. Annual Conference, Louisville, Kentucky, November, 1984.

Joseph, B. E.; Spraker, T. Acute fatal pharyngitis in a California sea otter (Enhydra lutris). International Association for Aquatic Animal Medicine Annual Conference, San Antonio, Texas, May, 1989.

Joseph, B. E.; Torgerson, R. W. Advanced renal disease in an aged Atlantic walrus (Odobenus rosmarus); emphasizing clinical presentation and therapy. International Association for Aquatic Animal Medicine Annual Conference, San Antonio, Texas, May, 1989.

Cornell, L. H.; Joseph, B. E.; Antrim, J. E.; Asper, E. D. First birth of a Commerson's dolphin in a marine zoological park and some notes on the biology of the species. International Whaling Commission, June, 1985.

Cornell, L. H.; Joseph, B. E. Anesthesia and tusk extraction in walrus. American Association of Zoo Veterinarians Annual Conference, Phoenix, October, 1985.

Cornell, L.H.; Joseph, B.E. Marine mammal transport. American Association of Zoo Veterinarians Annual Conference, Chicago, Il, November, 1986.

Cornell, L.H.; Joseph, B.E. Water quality maintenance. American Association of Zoo Veterinarians Annual Conference, Chicago, Il, November, 1986.

Osborn, K. G.; Joseph, B. E. Lymphosarcoma in three harbor seals (Phoca vitulina). American Association of Zoo Veterinarians Annual Conference, Toronto, Ottawa, November, 1988.

Walker, L. A.; Czekala, L. H.; Cornell, L. H.; Joseph, B. E.; Dahl, K. D.; Lasley, B. L. Analysis of the ovarian cycle and pregnancy of the killer whale by urinary hormone measurement, Society for the Study of Reproduction, 1987.

RONALD LEWIS TILSON

Institutional Affiliation:

Minnesota Zoological Garden  
12101 Johnny Cake Ridge Road  
Apple Valley, MN 55124

Title:

Director of Conservation  
Telephone: (612) 431-9267  
FAX: (612) 432-2757

This position reports to the General Director of the Minnesota Zoo. It is accountable for the supervision of 40 full-time and 24 seasonal employees, an operating budget of approximately \$1.1 million and an animal collection worth \$100,000. The position is responsible for the administration of the Division of Conservation: this includes local, national and international conservation programs vital to the Zoo, supervision of all endangered species programs, programming of educational and interpretive activities, management of the interpretive programs animal collection, and zoological research within and between outside institutions.

Military Service: U.S. Marine Corps, 1962-1966

Peace Corps Volunteer: Lecturer in Entomology, Institute of Public Health, Kuala Lumpur, Malaysia with World Health Organization, 1968-1969

Education:

B.S. Entomology/Zoology, University of California, Davis, 1967  
M.S. Entomology/Physiology, University of California, Davis, 1968  
Ph.D. Ecology, Division of Environmental Studies, University of California, Davis, 1980

Professional Experience:

1990 - Present Director of Conservation, Minnesota Zoological Garden  
1988 - Present Book Reviews Editor, Journal of Zoo Biology  
1987 - Present Coordinator, AAZPA/Species Survival Committee for Siberian Tigers  
Professor of Wildlife Conservation and Fisheries, University of Minnesota, St. Paul  
1986 - 1989 Director of Biological Programs, Minnesota Zoological Garden  
Member, IUCN/SSC Cat Specialist Group  
1985 - Present Member, AAZPA/Species Survival Program Subcommittee

- 1985 - 1988 Member, University of Minnesota's Animal Care Committee
- 1985 - 1986 Coordinator, International Symposium on World Conservation Strategies for Tigers
- Member, IUCN/SSC Asian Primate Specialist Group
- 1983 - 1986 Research Biologist, Minnesota Zoological Garden
- 1982 - Present Member, IUCN/SSC Hyena Specialist Group
- 1981 - 1983 Curator of Research, Oklahoma City Zoo
- Adjunct Assistant Professor of Zoology, University of Oklahoma and Oklahoma State University
- Adjunct Assistant Professor of Biology, Texas Christian University, Ft. Worth
- 1976 - 1979 Terrestrial Ecologist (Post-Doctoral), Desert Ecological Research Unit, Namib Research Institute, Gobabeb, SWA/Namibia.

Grants and Fellowships:

- Smithsonian Institute (Institute of Museum Service), 1990 - in support of a conservation assessment program of the Minnesota Zoo (\$6,000)
- National Science Foundation, 1989-1990 - in support of Young Scholar's Program (\$58,000 over two years)
- Smithsonian Institute (National Museum Act) U.S. Fish and Wildlife Service (Office of International Affairs), Windstar Foundation, 1986 - in support of an International Tiger Conservation Symposium (\$37,000)
- Oklahoma Zoological Society and Vulture Study Group Grant, 1983 - in support of Vulture Field Studies - Belize (\$2,600)
- National Science Foundation (Science in Developing Countries Program) Management and Biology of Social Carnivores in Chobe National Park, Botswana (\$138,903 over 3 years with W. J. Hamilton III, not activated)
- Council for Scientific and Industrial Research (Research Associate Grant), 1976-1979 - in support of ecological field studies of the Namib Desert, SWA/Namibia (\$168,000 over 3.5 years)
- Fauna Preservation Society Grant; Carnegie Museum of Natural History Fellowship; American Committee for International Wildlife Protection Fellowship, 1973-1974 - in support of primate field studies, Mentawai Islands, Indonesia (\$18,000)

Smithsonian Institute (Foreign Exchange Program), 1972 - in support of primate field studies, Assam, India (\$48,000 over 2 years)

Smithsonian Institute (Research Development Grants) to India, 1973; Pakistan and India, 1972; Morocco and India, 1971 - in support of field reconnaissance (\$22,500 over 3 years)

Rockefeller Foundation Fellowship (University of California), 1970-1973 - in support of graduate studies (\$42,000 over 3 years)

Undergraduate Research Fellowship (University of California), 1967-1968 - in support of under graduate research (\$24,000 over two years)

Consultation Experience:

For the Government of South West Africa/Namibia. 1979. Evaluation of the environmental impact of human activity on the Kuiseb River, Namib-Naukluft Park, and recommendations for alternative uses.

For the Division of Nature Conservation and Tourism, SWA/Namibia. 1977-79. Member of the Kuiseb Environmental Committee for coordinating collaborative research projects on the Kuiseb River.

For the Council for Scientific and Industrial Research (CSIR), South Africa. 1977. Member of the National Program for Environmental Science (Terrestrial Biology) for identifying research priorities for the Kuiseb River, SWA/Namibia.

For the Department of Nature Conservation and Wildlife Management, Indonesia. 1973-74. Evaluation of the impact of timbering and human predation on Mentawai endemic primate species and recommendation for alternative primate protection strategies (see Appendix I).

For International Activities Office, Smithsonian Institution, Washington, D.C. 1972. Research development in Pakistan evaluating opportunities for field research and developing guidelines for collaboration between U.S. and Pakistani ecologists.

For International Activities Office, Smithsonian Institution, Washington, D.C. 1971. Research development in Morocco and India for evaluating opportunities for field research and developing guidelines for collaboration between U.S. and Moroccan and Indian ecologists.

Field Activities:

- |         |   |
|---------|---|
| 1968-69 | Field entomologist, W.H.O. sponsored malaria eradication program, Malaysia. (11 months) |
| 1971    | Research development in India and Morocco. (2 months)                                   |
| 1971    | Reconnaissance to Mentawai Islands, Indonesia. (1 month)                                |

- 1972            Research development in Pakistan evaluating opportunities for collaboration on ecological field studies. (2 months)
- 1972            Research development and field study of gibbons in Assam, India. (4 months)
- 1973            Field observations of gibbons, Khao Yai National Park, Thailand. (2 weeks)
- 1973-74        Field study of gibbons, langurs and the influence of human predation, Mentawai Islands, Indonesia. (21 months)
- 1976-79        Field study of the ecology of the Kuiseb River Canyon, Namib-Naukluft Park, SWA/Namibia. (39 months)
- 1983            Field reconnaissance of the Lesser Yellow-headed Vulture, Crooked Tree Lagoon, Belize, Central America. (2 weeks)
- 1987            Cultural exchange program "sister-zoo relationship" with Xian Zoo, Shaanxi Province, Peoples Republic of China. Conservation of the golden monkey.
- 1989            Asian Rhino Specialist Group Meeting, Bogor, Indonesia. Conservation of the Javan rhino.

Publications/Reports (1971-Present):

- 1971           Tilson, R.L. A research reconnaissance to Morocco and India to evaluate prospects for field research. Spec. Rept. Smithsonian Institution, Washington, D.C. 17 pp.
- 1972           Tilson, R.L. The status of the primate species in Hollongapar Forest Reserve, Assam, India. Spec. Rept. Govt. of India and Smithsonian Institution, Washington, D.C. 16 pp.
- Tilson, R.L. A research reconnaissance to Pakistan to evaluate prospects for ecological field studies. Spec. Rept. Smithsonian Institution, Washington, D.C. 14 pp.
- 1973           Tilson, R.L. The Mentawai Islands' primates: a proposal for survival. Spec. Rept. I.U.C.N., Morges, Switzerland, ii + 34 pp.
- 1974           Tilson, R.L. Man and Monkey: concepts in conservation for the Mentawai Islands' primates. Spec. Rept. I.U.C.N., Morges, Switzerland, ii + 42 pp.
- 1976           Tilson, R.L. Infant coloration and taxonomic affinity of the Mentawai Island leaf monkey (Presbytis potenziani). Journal of Mammalogy 57:767-769.
- Tilson, R.L. and R.R. Tenaza. Monogamy and duetting in an Old World monkey. Nature 263:320-321.
- 1977           Tilson, R.L. Social organization of Simakobu monkeys (Nasalis concolor) in Siberut Island, Indonesia. Journal of Mammalogy 58:202-212.
- Tilson, R.L. Duetting in Namib Desert klipspringers. South African Journal of Science 73:314-315.
- Tilson, R.L. Pale-winged starlings and klipspringers in the Kuiseb River Canyon, Namib Desert Park. Ostrich 48:110-111.
- Tilson, R.L. and J.W. Tilson. The lower Kuiseb Canyon: its ecology and its mammalian fauna. Bulletin Transvaal Museum 1977-78:46-50.
- Tenaza, R.R. and Tilson, R.L. Evolution of long-distance alarm calls in Kloss's gibbons. Nature 268:233-235.
- 1978           Tilson, R.L. and J.W. Tilson. Ecology of the Kuiseb River Canyon: an overview. Bulletin Transvaal Museum 1978-79:1-12.

- 1979           Tilson, R.L. Der unbekante Affe. Tier 5:20-23.
- Tilson, R.L. Behaviour of hoolock gibbons (Hylobates hoolock) during different seasons in Assam, India. Journal of Bombay Natural History Society 76:1-16.
- Tilson, R.L. Resolving the land-use conflict of the Kuiseb River. Spec. Rept. Administrator General, SWA/Namibia. 8 pp.
- Tilson, R.L. and J.W. Tilson. The ecology of the Kuiseb River-predator/prey studies. Bulletin Transvaal Museum 1979-80:1-17.
- Henschel, J., R.L. Tilson and F. von Blottnitz. Implications of spotted hyena bone assemblage in the Namib Desert. South African Archaeological Bulletin 34:127-131.
- 1980           Tilson, R.L. Social structure of klipspringer, Oreotragus oreotragus, and predator avoidance in a desert canyon. Madoqua 11:303-314.
- Tilson, R.L. Das wustenwunder von Namibia. Tier 11:10-13.
- Tilson, R.L. and O.B. Kok. Habitat ecology of black storks in the Kuiseb River Canyon. Madoqua 11:347-350.
- Tilson, R.L., F. von Blottnitz and J. Henschel. Prey selection by spotted hyena (Crocuta crocuta) in the Namib Desert. Madoqua 12:41-19.
- Wharton, R., J.W. Tilson and R.L. Tilson. Asynchrony in a wild population of Ficus sycamorus. South African Journal of Science 76:478-480.
- Wittenberger, J.F. and R.L. Tilson. The evolution of monogamy: hypotheses and evidence. Annual Review of Ecology and Systematics 11:197-232.
- 1981           Tilson, R.L. Family formation strategies for Kloss's gibbons. Folia Primatologica 35:259-287.
- Tilson, R.L. A dry river in a thirsty land. Rossing Magazine July:1-10.
- Tilson, R.L. Cape hunting dogs: a dilemma for three sisters. ZooSounds 17 (6):31.
- Tilson, R.L. and P.M. Norton. Alarm duetting and pursuit deterrence in an African antelope. American Naturalist 118:455-462.

- 1982      Tilson, R.L. The western limit of pigtail macaque distribution in Assam. Journal of Bombay Natural History Society 79:399-400.
- Tilson, R.L. Maligned hyenas of the African savannah. ZooSounds 18 (1):4-5.
- Tilson, R.L. Hermaphroditism or sexual mimicry in spotted hyenas. ZooSounds 18 (3):4-5. Reprinted in Zoolog 7:5-6 (1982).
- Tilson, R.L. The black and white invisible zebra myth. ZooSounds 18 (5):4-5.
- Tilson, R.L. Dogs and wolves, goats and antelope: The '82 Landreth connection. ZooSounds 18 (4):8-10.
- Tilson, R.L. and L. Curtis. Mountain gorillas: persecuted giants of Mount Virunga. ZooSounds 18 (2):2-3.
- Tilson, R.L. and B. Miller. The myth of the bird-like appetite. ZooSounds 18 (4):4.
- Tilson, R.L. and R.R. Tenaza. Interspecific spacing between gibbons (Hylobates klossii) and langurs (Presbytis potenziana) on Siberut Island, Indonesia. American Journal of Primatology 2:355-361.
- Hamilton, W.J. III and R.L. Tilson. Solitary male chacma baboons in a desert canyon. American Journal of Primatology 2:12-22.
- 1983      Tilson, R.L. Carcass protocol. Natural History March:42-47.
- Tilson, R.L. Tall tales of a tailless ape. American Journal of Primatology 5:175-177. [A review of The Gibbons of Siberut by Tony Whitten. London, Melbourne and Toronto, J.M. Dent and Sons, Ltd. 1982, 207 pp.].
- Tilson, R.L. The zebra stripe puzzle. ZooSounds 19 (1):10-11.
- Tilson, R.L. Antelopes, vultures, egrets: the '83 Landreth connection. ZooSounds 19 (4):17-19.
- Tilson, R.L. Primate fauna of the Indian subcontinent. In: Encyclopedia of Indian Natural History 1883-1983. R.E. Hawkins, ed. Bombay Natural History Society, Bombay (in press).
- Tilson, R.L. The langurs of India. In: Encyclopedia of Indian Natural History 1883-1983. R.E. Hawkins, ed. Bombay Natural History Society, Bombay (in press).

Tilson, R.L. The hoolock gibbon. In: Encyclopedia of Indian Natural History 1883-1983. R.E. Hawkins, ed. Bombay Natural History Society, Bombay (in press).

Tilson, R.L. and P. LeRoux. Resource partitioning in coexisting Namib Desert owls, Bubo africanus and Tyto alba. Madoqua 13 (3):221-227.

Tilson, R.L. and B. Miller. Macaws: flight towards extinction. ZooSounds 19 (1):4-5.

Tilson, R.L. and B. Miller. In search of John Crow at Crooked Tree. ZooSounds 19:4-8.

Tilson, R.L. and B.W. Miller. Field reconnaissance of the Lesser Yellow-headed Vulture, Central Belize. Spec. Rept. Vulture Study Group. x + 87 pp.

1984

Tilson, R.L. and B.W. Miller. Bionomics of scavenging birds of prey. Zoo Biology 3:79-82. [A review of The Comparative Biology of Southern African Vultures by P.J. Mundy. Johannesburg, South Africa. Vulture Study Group. 1982. 294 pp.]

Delay, L. and R.L. Tilson. Games kids play. ZooSounds 19 (3):8-10.

Tilson, R.L. Ostrich egg roll [a letter]. Natural History 9:7.

Rasmussen, J.L. and R.L. Tilson. Food provisioning by adult maned wolves (Chrysocyon brachyurus). Zeitschrift fur Tierpsychologie 65:346-352.

1985

Tilson, R.L. The nuances of being a territorial gazelle. Zoo Biology 4:87-89. [A review of Gazelles and their Relatives - A Study in Territorial Behavior by F.R. Walther, E.C. Mungall, and G.A. Grau. Noyes Publications, Park Ridge, N.J., 1983, 239 pp.]

Tilson, R.L. and W.J. Hamilton III. Social dominance and feeding patterns of spotted hyenas in the Namib Desert. Animal Behavior 32:715-724.

Tilson, R.L. and J.R. Henschel. Spotted predators of the Namib night. African Wildlife 39(2):50-55. [Die gavlekte Hiena - roof dier van die Namib-nag, Afrikans translation].

Gittens, S.P. and R.L. Tilson. Notes on the ecology and behaviour of the hoolock gibbon. In: The Lesser Apes, pp. 258-266. H. Preuschoft, D.J. Chivers, W.Y. Brockelman and N. Creel, eds. Edinburgh Univ. Press, Edinburgh.

Haimoff, E.H. and R.L. Tilson. Individuality in the female songs of wild Kloss' gibbons (Hylobates klossii) on Siberut Island, Indonesia. Folia primatologica 44:129-137.

Hamilton, W.J. III and R.L. Tilson. Fishing baboons at desert waterholes. American Journal of Primatology 8:255-257.

Miller, B.W. and R.L. Tilson. Snail Kite Kleptoparasitism of Limpkins Auk 102:170-172.

Reindl, N.J. and R.L. Tilson. Bachelor herds and stallion depots: A new approach to an old problem. 1985 AAZPA Annual Proceedings: xx-xx.

Tenaza, R. and R.L. Tilson. Human predation and Kloss' gibbon (Hylobates klossii) sleeping trees in Siberut Island, Indonesia. American Journal of Primatology 8:299-308.

1986

Tilson, R.L. Primate mating systems and their consequences for captive management. In: Primates: The Road to Self-Sustaining Populations pp. 361-373 (K. Benirschke, ed., Springer-Verlag, New York).

Tilson, R.L. Camel humps and udder facts. Minnesota Zoo Magazine May/June:4-5.

Tilson, R.L. and J.R. Henschel. Spatial arrangement of spotted hyena groups in a desert environment, Namibia. African Journal of Ecology 24:173-180.

Tilson, R.L. and J.W. Tilson. Population turnover in a monogamous antelope (madoqua kirki) in Namibia. Journal of Mammalogy 67:610-613.

Tilson, R.L. Evaluating fertility in male Siberian tigers. Minnesota Zoo Magazine Sept/Oct:5.

Tilson, R.L. and U.S. Seal. Dilemma in tigerland: A problem of small population numbers. Proceedings 1986 AAZPA National Conference (In press).

Tilson, R.L. and U.S. Seal. Characterizing estrus in Siberian tigers. Proceedings 1986 AAZPA National Conference (In press).

DonCarlos, M., J. Petersen and R.L. Tilson. Captive biology of an asocial mustelid (Mustela erminea). Zoo Biology 5:363-370.

Hamilton, W.J. III, R.L. Tilson and L.G. Frank. Sexual monomorphism in spotted hyenas, Crocuta crocuta. Zeitschrift fur Tierpsychologie 71(1):63-73.

Mitchell, A.H. and R.L. Tilson. Restoring the balance: Traditional hunting and primate conservation in the Mentawai Islands, Indonesia. In: Primate Ecology and Conservation, pp. 249-260. (J.G. Else and P.C. Lee, eds., Cambridge University Press. Cambridge).

1987

Tilson, R.L. Chinese golden monkeys: Ambassadors of conservation. Minnesota Zoo Magazine. May/June:6-7.

Tilson, R.L. and U.S. Seal. Tigers of the World: The Biology, Biopolitics, Management, and Conservation of an Endangered - Species pp 1-502, Noyes Publishers, New Jersey.

Binczik, G.A. and R.L. Tilson. A (lion) by any other name. Minnesota Zoo Magazine. July/August:6-7.

Byers, A.P., A.G. Hunter, H.C. Hensleigh, H.C. Kreeger, U.S. Seal, G.A. Binczik, N.J. Reindl and R.L. Tilson. In vitro capacitation of Siberian tiger spermatazoa. Zoo Biology 6:297-304.

Binczik, G.A., N.J. Reindl, R. Taylor, U.S. Seal and R.L. Tilson. A neonatal growth model for captive Amur tigers. In: Tigers of the World: The Biology, Biopolitics, Management and Conservation of an Endangered Species. pp. 167-170. (R.L. Tilson and U.S. Seal, eds., Noyes Publishers, New Jersey).

Hensleigh, H.C., A.P. Byers, G.S. Post, N.J. Reindl, U.S. Seal and R.L. Tilson. Evaluation of tiger fertility by the sperm penetration assay. In: Tigers of the World: The Biology, Biopolitics, Management and Conservation of an Endangered Species, pp. 280-285. (R.L. Tilson and U.S. Seal eds., Noyes Publishers, New Jersey).

Post, G.S., H.C. Hensleigh, A.P. Byers, U.S. Seal, T.J. Kreeger, N.J. Reindl, and R.L. Tilson. Sperm penetration of the zona-free hamster ova by Siberian tiger sperm. Zoo Biology. 6:183-188.

Rhine, R.J., and R.L. Tilson. Reactions to fear as a proximate factor in the sociospatial organization of baboon progressions. American Journal of Primatology 13:119-128.

Seal, U.S., P. Jackson and R.L. Tilson. A global tiger survival plan. In: Tigers of the World: The Biology, Biopolitics, Management and Conservation of an Endangered Species, pp. 487-498. (R.L. Tilson and U.S. Seal, eds., Noyes Publishers, New Jersey).

Seal, U.S., R.L. Tilson, E.D. Plotka, N.J. Reindl and M.F. Seal. Behavioral indicators and endocrine correlates of estrus and anestrus in Siberian tigers. In: Tigers of the World: The Biology, Biopolitics, Management and Conservation of an Endangered Species, pp. 244-252. (R.L. Tilson and U.S. Seal, eds., Noyes Publishers, New Jersey).

1988

Tilson, R.L. Tracking the tiger. Natural History 97:72-75.

Tilson, R.L., K.A. Sweeny, G.A. Binczik and N.J. Reindl. Buddies and bullies: Social structure of a bachelor group of Przewalski horses. Applied Animal Behaviour Science 21:169-185.

Tilson, R.L., G.A. Binczik and M.W. DonCarlos. Zoo science vs. zoo voodoo: Integrating research with animal management. In: Wild Mammals in Captivity: A Guide to Management, pp. xxx-xxx. (S. Lumpkin and D. Kleiman, eds., University Chicago Press, Chicago). (In press.)

Henschel, J.R. and R.L. Tilson. How much does a hyena eat? Perspective from the Namib Desert. African Journal of Ecology. 26: 217-255.

Byers, A.P., A.G. Hunter, U.S. Seal, G.A. Binczik, E.F. Graham, N.J. Reindl and R.L. Tilson. In vitro induction of capacitation of fresh and frozen Siberian tiger sperm. Journal of Reproduction 86:599-607.

Byers, A.P., A.G. Hunter, U.S. Seal, E.F. Graham and R.L. Tilson. The effect of season on semen parameters and serum hormone levels in captive male Siberian tigers (Panthera tigris). Journals of Reproduction and Fertility. (In press).

Manuscripts in Review:

Tilson, R.L., A. Gaski, and B.W. Miller. Ostrich egg breaking by Egyptian vultures: a reassessment of ontogeny. Science.

Tilson, R.L., J.W. Tilson and O.B. Kok. Water hole ecology in the seasonally dry Kuiseb River Canyon. Madoqua.

Reviewer for:

Science, Evolution, American Naturalist, Journal of Mammalogy, Journal of Zoo Biology, Animal Behavior, Brain and Biology, American Journal of Primatology, National Geographic.

Associate Editor for: Journal of Zoo Biology (1981-present); ZooSounds--Oklahoma Zoological Society (1981/1983); Minnesota Zoo Magazine (1986/1988).

Current Research Efforts (manuscripts in preparation):

Chemical immobilization of Siberian tigers using ketamine hydrochloride in combination with either promazine hydrochloride or xylazine (with U.S. Seal, M.F. Seal and T. Kreeger).

Seasonal changes in sperm yield by electroejaculation and in immunoreactive serum testosterone and LH and the response to LHRH in the Siberian tiger (with U.S. Seal, M.F. Seal, and F. Wright).

Serum cortisol and progesterone responses to ACTH in the male and female Siberian tiger (with U.S. Seal, M.F. Seal and T. Kreeger).

Retrograde ejaculation with electroejaculation in the Siberian tiger treated with promazine or haliperidol (with U.S. Seal, M.F. Seal and F. Wright).

Artificial insemination and ovulation in Siberian tigers (with F. Smith, U.S. Seal, M.F. Seal and T. Kreeger).

Appendix I

Conservation Actions Based Upon Preceding Field Activities

The opening of the Mentawai Islands to timbering interests in the early 1970's posed an immediate threat to the welfare of the unique primate populations there. The islands are distinct from areas elsewhere in Indonesia in their four endemic primate species (two leaf-monkeys, a macaque and a gibbon) confined to about 7,000 km<sup>2</sup> of rain forest. Throughout the course of my study, I and other colleagues reviewed possibilities for protection of these primate populations in collaboration with appropriate Indonesia officials. Attention to the problems of unmonitored timbering, and increased human predation, and possible recommendations for alternate primate protection strategies were developed (Tilson 1973, 1974). Through discussions with the Department of Nature Conservation and Wildlife Management, a proposal was submitted to the Indonesian government. In 1974 these activities resulted in the establishment of a 6,000 ha wildlife reserve (Teitei Batti) in the northern island of Siberut.

Since then there has been an active program of primate monitoring by the Indonesian wildlife conservation authorities in conjunction with IUCN/WWF sponsored personnel throughout the Mentawai Islands in response to the interest generated by the proposal. As a result the Indonesian government has become increasingly aware of the value of protecting primates throughout the archipelago, as well as the absolutely unique Mentawai Islands species.

Invited Lectures/Abstracts (1977 to Present)

- 1977    Tilson, R.L. Family formation strategies of Mentawai Island gibbons. Division of Environmental Studies. University of California. Davis, CA.
- Tilson, R.L. Mating systems of Mentawai Islands primates. University of California Primate Center, Davis. Zoology Department. University of California. Berkeley, CA.
- Tilson, R.L. Natural History of the Mentawai Islands. Audubon Society. Davis, CA.
- Tilson, R.L. Gibbon mating and spacing systems. Department of Anthropology. Harvard University. Cambridge, MA.
- Tilson, R.L. Studying gibbons in the Mentawai Islands. Radio Interview on BBC's Nature Notes. London, England.
- Tilson, R.L. Natural History of the Mentawai Island Primates. Division of Nature Conservation, Windhoek, and the S.W.A. Wildlife Society, Windhoek, SWA/Namibia.
- Tilson, R.L. Social structure and ecology of klipspringer in SWA/Namibia. Second International Symposium of Wildlife Research and Management. Pretoria, South Africa. (Abstract)
- 1978    Tilson, R.L. The evolution of monogamy. Mammal Research Institute, Pretoria, South Africa.
- Tilson, R.L. Ecological research in South Africa. Radio interview on South African BC, Pretoria, South Africa.
- Tilson, R.L. and J.W. Tilson. Klipspringer feeding ecology. Professional Officer's Meeting, Division of Nature Conservation. Windhoek, SWA/Namibia.
- Tilson, R.L. Behavior of small South West African antelope. SWA Wildlife Society, Windhoek, SWA/Namibia.
- Tilson, R.L. Territorial systems of monogamous antelope. Windhoek German Schools. Windhoek, SWA/Namibia.
- 1979    Tilson, R.L. and J.W. Tilson. The ecology of the Kuiseb River Canyon. Division of Nature Conservation. Windhoek, SWA/Namibia.
- Tilson, R.L. Resolution of the Kuiseb River land-use problem. Namib Research Institute, Gobabeb, SWA/Namibia.

- Tilson, R.L. The ecology of a desert canyon. Museum of Comparative Zoology. University of California. Berkeley, CA.
- Tilson, R.L. Comparative behavior of Asian primates. Department of Anthropology. University of California. Davis, CA.
- 1980 Tilson, R.L. The natural history of the Namib Desert. Wildlife Society, Fresno, CA.
- Tilson, R.L. Human predation and gibbon alarm calls. Department of Zoology. San Francisco State University. San Francisco, CA.
- Tilson, R.L. Social dominance and feeding patterns of spotted hyenas. Department of Zoology. University of California. Davis, CA.
- 1981 Tilson, R.L. Natural history of the Namib Desert. Animal Research Council, Oklahoma City Zoo. Oklahoma City, OK.
- Tilson, R.L. Social carnivory in spotted hyenas. Department of Zoology. University of Oklahoma. Norman, OK.
- Tilson, R.L. Evolution of mating systems. Department of Anthropology. University of Oklahoma. Norman, OK.
- Tilson, R.L. Group dynamics of Cape hunting dogs. Animal Research Council, Oklahoma City Zoo. Oklahoma City, OK.
- Tilson, R.L. Gibbon territoriality. Department of Zoology. University of Oklahoma. Norman, OK.
- Tilson, R.L. and B.W. Miller. Development of tool-use behavior in Egyptian vultures. Oklahoma Academy of Science. Chickasha, OK.
- 1982 Tilson, R.L. Sexual mimicry in spotted hyenas. Department of Biological Sciences. Texas Christian University. Fort Worth, TX.
- Tilson, R.L. Research design and data collection. Department of Zoology. Oklahoma State University. Norman, OK.
- Tilson, R.L. Klipspringer vigilance and predator avoidance. Zoology seminar series. University of Oklahoma. Norman, OK.
- Tilson, R.L. Natural history of the Namib Desert. Audubon Society. Oklahoma City, OK.
- 1983 Tilson, R.L. The living sands of the Namib. Department of Biological Sciences. Southeastern Oklahoma State University. Durant, OK.

Tilson, R.L. Research horizons and dead ends in modern zoos. Department of Biological Sciences. Southwestern Oklahoma State University. Weatherford, OK.

Tilson, R.L. Research activities at the Oklahoma City Zoo. Oklahoma Medical Research Foundation. Oklahoma City, OK.

Tilson, R.L. Implications of food provisioning in maned wolves. AAZPA Central Regional Meeting, Albuquerque, NM. (Abstract)

Tilson, R.L. Resource dispersion, spacing systems and predator avoidance in small African antelope. Research Department, National Zoo and Smithsonian Institute. Washington, D.C.

Tilson, R.L. The Natural history of the Mentawai Islanders. Department of Anthropology. University of Oklahoma. Norman, OK.

Tilson, R.L. Social carnivory in spotted hyenas. Department of Zoology. Oklahoma State University. Stillwater, OK.

Tilson, R.L. Research horizons and dead ends at the Oklahoma City Zoo. Department of Biology. Southwestern Oklahoma State University. Weatherford, OK.

Tilson R.L. and B.W. Miller. Social and ecological aspects of lesser yellow-headed vulture feeding patterns in Belize, Central America. 1983 Raptor Research and Vulture Study Group Meetings. St. Louis, MO. (Abstract)

Tilson, R.L. Wildlife conservation in South East Asia. Department of Wildlife and Fisheries Biology. Oklahoma State University. Stillwater, OK.

Tilson, R.L. New directions in the conservation of an enigmatic vulture. Oklahoma Academy of Sciences. Tulsa, OK. (Abstract)

Tilson, R.L. and B.W. Miller. Interspecific dominance and feeding strategies of lesser yellow-headed vultures. American Ornithology Union. New York, NY. (Abstract)

Tilson, R.L. and J.R. Henschel. The socio-ecology of Namib Desert spotted hyenas. Symposium on zoology of Arid and Semi-arid Environments. Swakopmund, SWA/Namibia. (Abstract)

Gaski, A., R.L. Tilson and B.W. Miller. Spreadwing posture in accipitrid vultures. 1983 Raptor Research and Vulture Study Group Meetings. St. Louis, MO. (Abstract)

- 1984 Tilson, R.L. Sexual monomorphism and social carnivory in spotted hyenas. Departments of Ethology and Behavioral Biology/Fish and Wildlife Sciences. University of Minnesota. Minneapolis, MN.
- Tilson, R.L. Gibbon of Southeast Asia. Zoo Volunteer Update, Minnesota Zoological Garden, Apple Valley, MN.
- McDevitt, A., D. Fusco, R. Ferwerda, F. Wright, J. Kirtland, Jr., U.S. Seal, E. Plotka and R.L. Tilson. Erratic behavior of an Atlantic Bottlenose dolphin during first estrus. 12th Annual International Marine Animal Trainers Association (IMATA). Long Beach, CA. (Abstract)
- Mitchell, A.H. and R.L. Tilson. Restoring the balance: Traditional hunting and primate conservation in the Mentawai Islands, Indonesia. International Primatology Congress, Nairobi, Kenya. (Abstract)
- Tilson, R.L. Research horizons and the "Modern Zoo." Department of Biology, Macalester College, St. Paul, MN.
- 1985 Tilson, R.L. Captive management questions of the "Modern Zoo", Department of Psychology. St. Olaf's College, Northfield, MN.
- Tilson, R.L. Primate mating systems and their consequences for captive management. International Symposium - Primates: the road to self-sustaining populations, San Diego, CA (Abstract).
- Tilson, R.L. and J. Henschel. Conservation biology of spotted hyenas in a desert environment. Fourth International Theriological Congress, Edmonton, Canada (Abstract).
- Tilson, R.L. 1) Primate social organization and human predation in the Mentawai Islands, Department of Zoology; 2) Social carnivory in hyenas, Department of Animal Ecology, Iowa State University, Ames, IA.
- Tilson, R.L. Natural history of the Namib Desert. Audubon Society, South Minneapolis.
- Tilson, R.L. Copulatory behavior and reproductive success in Siberian tigers. International Symposium - World Conservation strategies for Tigers, Minneapolis, MN (Abstract).
- Reindl, N. and R.L. Tilson. Stallion depots and bachelor herds: A new approach to an old problem. 1985 National AAZPA Conference, Columbus, OH (Abstract and video presentation).
- 1986 Tilson, R.L. "Modern Zoo's" contributions to conservation. Department of Psychology, St. Olaf's College, Northfield, MN.

Tilson, R.L. and U.S. Seal. Characterizing estrus in Siberian tigers. 1986 National AAZPA Conference, Minneapolis, MN (Abstract).

Tilson, R.L. and U.S. Seal. Dilemma in tigerland: A problem of small population numbers. 1986 National AAZPA Conference, Minneapolis, MN (Abstract).

Post, G.S., H.C. Hensleigh, A.P. Byers, U.S. Seal, T.J. Kreeger, N.J. Reindl and R.L. Tilson. Evaluation of Siberian tiger sperm using zona-free hamster ova. National AAZV Proceedings (Abstract).

1987 Tilson, R.L. Dilemma in tigerland. Special Lecture Series, Wildlife Week, Fisheries and Wildlife, University of Minnesota.

Tilson, R.L. Conservation philosophy and management strategies of an endangered species in third world countries. Clemson Environmental Research Center, Clemson University.

Byers, A.P., A.G. Hunter, U.S. Seal, G.A. Binczik, E.F. Graham, N.J. Reindl and R.L. Tilson. In vitro induction of capacitation of fresh and frozen Siberian tiger sperm. 1987 National AAZPA Conference, Portland, OR (Abstract).

References for Ronald L. Tilson

Professor William J. Hamilton III  
Division of Environmental Studies  
University of California  
Davis, CA 95616  
(916) 752-1122

Christen Wemmer, Ph.D.  
Assoc. Dir. for Conservation  
National Zoological Park Conservation  
and Research Center  
Front Royal, VA 22630  
(703) 635-4166

Professor James Shaw  
Department of Zoology  
Oklahoma State University  
Stillwater, OK  
(405) 624-5555

Donald Lindburg, Ph.D.  
Research Department  
San Diego Zoo  
P.O. Box 551  
San Diego, CA 92112  
(714) 231-1515 ext. 311

Terry Maple, Ph.D.  
Director, Zoo Atlanta  
800 Cherokee Avenue, SE  
Atlanta, GA 30315  
(404) 624-5600

**RICHARD C. BUSKE**  
Minnesota Zoological Garden  
Apple Valley, MN 55124  
Work: (612) 431-9303

## EDUCATION

1970 B.S. in Business (Accounting major), UNIVERSITY OF MINNESOTA  
1976 C.P.A. Certificate issued

## EMPLOYMENT HISTORY

### STATE OF MINNESOTA

Current Assistant Director/Operations  
Minnesota Zoological Garden  
Apple Valley, MN 55124  
Responsible for major division of the Minnesota Zoo which includes functions of Finance (budgeting, accounting and cash control), Physical Facilities (all construction, engineering and maintenance functions), and the purchasing, receiving and storeroom functions. Serves on the top management team.

9/84-7/86 Administrative Services Director  
Minnesota Zoological Garden  
Coordinate and oversee all financial aspects, the warehouse area, gift store and admissions functions of the Minnesota Zoo.

9/81-9/84 Accounting Manager  
Department of Energy, Planning & Development  
Responsible for the merging and consolidating of the four fiscal services functions into the new agency. Reported to the agency's Deputy Commissioner. Responsible for directing and coordinating the fiscal activities, including accounting, budgeting, financial reporting and payroll. Supervise a staff of 11 professional and paraprofessional employees. Responsible for developing and implementing policy and reporting directives for general agency accounting, grants, loans and specialized funds. Agency budget of approximately \$41 million for FY 1983. Member of the agency's Executive Committee.

10/78-8/81 Administrative Officer  
Department of Economic Development  
Directed and coordinated staff of three professionals. Responsible for the preparation and implementation of agency operating budget. Supervised the operations and activities of the agency's accounting office. Acted as agency's personnel officer. Prepared and coordinated all requests by the agency to the Legislative Advisory Commission. Attended, at the direction of the

Commissioner, legislative hearings on agency budget matters. Coordinated preparation of the agency's biennial budget. Worked on special assignments as directed by the Commissioner.

7/78-9/78

Audit Director  
Office of the Legislative Auditor

Planned and directed audits of state agencies. Supervised staff of 2-4 professional auditors. Reviewed audit workpapers to determine that audit work had been performed and findings and recommendations were properly documented. Prepared final audit report and discussed the audit findings and recommendations with the agency's commissioner and appropriate staff.

5/73-6/78

Served in positions of increasing authority in the Office of the Legislative Auditor (Auditor, Intermediate Auditor, Senior Auditor, and Principal Auditor).

#### **U.S. FEDERAL GOVERNMENT**

12/72-4/73

Price Analyst  
Defense Contract Administration Services

Reviewed and analyzed price of defense contractor's contract proposals for work to be performed. Prepared government price negotiation position and assisted in negotiating contract price.

5/71-11/72

Auditor  
United States Postal Inspection Service  
Boston, MA

Supervised the year end audit of the International Accounts Branch of the Postal Data Center, New York, NY. Assisted in performing other aspects of the continuing financial audit of the Postal Data Center. Worked on performance audits and fraud case.

4/70-4/71

Worked part-time and unemployed.

#### **HOLY TRINITY LUTHERAN CHURCH**

1/69-3/70

Business Administrator

Responsible for collecting all receipts and making disbursements. Prepared monthly financial statements and annual financial statements. Also prepared the annual budget. Managed the daily operations and supervised the clerical, custodial, and day care center staffs. The church had an operating budget of \$300,000.

#### **MEMBERSHIPS**

Member, American Institute of Certified Public Accountants  
Member, Minnesota Society of Certified Public Accountants

**THOMAS B. WILLIAMS**  
Minnesota Zoological Garden  
Apple Valley, MN 55124  
Work: (612) 431-9323

## EDUCATION

1971 B.A., Saint John's University, Collegeville, MN

## EMPLOYMENT HISTORY

### STATE OF MINNESOTA

Current Assistant Director/Strategic Services  
MINNESOTA ZOOLOGICAL GARDEN  
Apple Valley, MN 55124

Responsible for the long range and strategic planning, capital project management, marketing/public relations, and creative services (graphics, audio-visual, photography, and exhibits) functions of the Zoo.

1986-1989 Assistant to the Director  
MINNESOTA ZOOLOGICAL GARDEN  
Apple Valley, MN 55124

Assist the General Director in planning, organizing and managing the Minnesota Zoo, with a \$7.8 million operating budget, 150 full-time employees, and serving approximately 900,000 visitors annually.

1985-1986 Management Analyst IV (Special Projects Director)  
MINNESOTA OFFICE OF FULL PRODUCTIVITY AND OPPORTUNITY

Managed the design, development and implementation of a statewide automated intake, information and referral, and client tracking system for all public assistance and employment and training programs.

1984-1985 Planner Principal  
Office of Intergovernmental and Community Relations  
DEPARTMENT OF ECONOMIC SECURITY

Provided policy development functions for the commissioner to assist in federal and state legislative initiatives. Developed and presented policy and legislative briefings for Minnesota Congressional Delegation. Responsible for state and federal legislative tracking on department related issues.

1977-1984

Economic Opportunity Program Specialist II, II, IV  
Office of Economic Opportunity and Community Services  
DEPARTMENT OF ECONOMIC SECURITY

Directed statewide food distribution program with responsibility for transportation, storage, food processing, distribution, foundation and corporate fundraising, federal/state relations and quality control. Supervised federal/state relations and quality. Supervised staff of six full time employees. Designed, implemented and administered federal (\$4.5 million) grant programs for a network of 36 community based organizations and Indian Reservations.

**ST. JOSEPH'S HOME FOR CHILDREN  
CATHOLIC CHARITIES**

1976-1977

Carpenter

1975-1976

Child Care Therapist

Therapist for 12 emotionally disturbed adolescent females in a residential treatment center.

**SAINT JOHN'S ABBEY AND UNIVERSITY  
Collegeville, Minnesota**

1973-1975

Carpenter

Designed and construction specialty furniture for University and Abbey. Planned, organized, designed and curated an exhibit commemorating 100 years of furniture design and construction at Saint John's Abbey (October 1974). Wrote, edited, photographed and published exhibition catalog.

1970-1974

Photographer and Graphic Designer

Provided photographic and graphic design services for University and Abbey public information office. Art director for alumni publications. Served on planning committees for alumni relations and fund raising.

ROBERTA SLADKY

1601 Thomas Avenue  
St. Paul, Minnesota 55104  
612/644-5230 (h) 612/625-4788 (w)

EDUCATION

University of Wisconsin, Madison, Wisconsin  
Bachelor of Science - August, 1974  
Major: Ornamental Horticulture  
Summer Internships: Paine Art Center and Arboretum, Oshkosh, WI  
Henry Foundation for Botanical Research,  
Gladwyne, PA

University of Delaware, Newark, Delaware  
Master of Science - May 1981  
Major: Public Horticulture Administration  
Longwood Program Fellowship June 1975 through June 1977  
Longwood Gardens Internships, summers of 1975 and 1976  
Teaching Assistant, Department of Plant Science  
Museum Studies Certificate

University of Minnesota, Minneapolis/St. Paul, Minnesota  
Elective course work in Agricultural Journalism, English,  
Journalism, Marketing, Recreation, Statistics

WORK  
EXPERIENCE

Minnesota Zoological Garden, Apple Valley, MN  
Curator of Horticulture, March 1988 to present

Manage all aspects of horticulture at the Minnesota Zoo, including a 1-1/2 acre Tropics complex, a greenhouse, and all other indoor and outdoor plants and landscaping. Develop a horticulture masterplan for the entire 485 acre site. Develop and maintain special horticultural displays and floral arrangements for Zoo special events. Supervise the Grounds department, which provides snow clearing and lawn maintenance services to the entire Zoo site.

Department of Botany, University of Minnesota, St. Paul, MN  
Assistant Scientist, Manager of the College of Biological Sciences  
Greenhouses, June 1977 to March 1988

Manage all aspects of the greenhouse complex which is used extensively for student course work and research in the biological sciences. Act as consultant for research conducted by faculty and students. Maintain and interpret a large plant collection which is toured by individuals and groups from the university and the community.

Continuing Education and Extension, University of Minnesota  
'A Spring Wildflower Weekend' May 1-3, 1987 and May 16-18, 1986.  
Designed and led a Study and Travel Adventure Informal Course whose focus was the spring flora of Wilder Forest, a retreat center north of the Twin Cities.

'Wildflowers and Plants of the North Shore' June 21-23, 1985.  
Developed and led a Study and Travel Adventure Informal Course which explored the flora of Minnesota's North Shore of Lake Superior.

'Gardens of the Delaware Valley' May 4-10, 1985.  
Organized, promoted and led a Study and Travel Adventure Informal Course designed to explore public and private gardens of the Philadelphia, Pennsylvania/Wilmington, Delaware area.

**PUBLICATIONS**

- "Garden Zen." Mpls/St. Paul Magazine, February 1985, pp. 116-118 (w/photographs).
- "Celeriac: Handsome Is as Handsome Does." The Minnesota Horticulturist, June/July, 1984, pp. 167, 172.
- "Some Far-Out Members of the Plant Kingdom." The Minnesota Horticulturist, February, 1984, pp. 36,46 (w/ photographs, incl. cover).
- "Winter Taxonomy Class Materials at the University of Minnesota, St. Paul." The Michigan Botanist, October, 1983, pp. 133-140. (Co-authored with Thomas Morley)
- "First Aid for Winter Worn." The Twin Cities Reader, February 9-15, 1983, p.5.
- "Plant Exploration." The Minnesota Horticulturist, April, 1982, pp. 119, 128.
- "Conservatory Awaits Funds." The Park Bugle, February, 1981, p.3.
- "The Eggplant Story." The Green Scene, May/June, 1978, p. 11.
- Lerner Publications Company, consultant for the following Lerner Natural Science Books (Children's science series.)  
How Leaves Change, 1986.  
Morning Glories, 1985.  
Rice, 1985.

**PUBLIC SERVICE  
EXPERIENCE**

St. Paul Department of Community Services, St. Paul, Minnesota  
Secretary, 1980-1984, of the Como Park Conservatory Planning Committee, which developed the Master Plan which qualifies the Conservatory for capital improvement funds.

Presented paper, "Grass-Roots Committee Plans Renovation of Inner-City Conservatory," to the 1981 Annual Meeting of the American Association of Botanical Gardens and Arboreta.

Member of the Como Park Conservatory Volunteer Training Committee, 1983 to 1985, which instituted and administered a volunteer program until a paid coordinator was funded. Continue involvement as instructor of volunteer guides. In March, 1985, I received the Most Honored Volunteer Award from the City of St. Paul, in recognition of these efforts.

**Youth Programs**

University of Minnesota Hospitals, Minneapolis, Minnesota  
Summers of 1980, 1981, 1983

Developed and presented classes and workshops in plant science and gardening to adolescent and child psychiatric in-patients as a horticultural addition to their therapy program.

Arlington House Shelter, St. Paul, Minnesota, Spring, 1982

Acted as consultant for the development of a vegetable gardening program for the teen-age residents. Applied for and received a Youth Gardening Grant from Gardens for All, Inc. to support the program.

**LECTURES**

Have presented numerous lectures on a wide variety of horticultural and botanical topics at the Minnesota Landscape Arboretum, University of Minnesota, Orchid Society, Minnesota Academy of Science, and area garden clubs.

**REFERENCES**

Available upon request

STEVEN R. HAGE  
14092 HEYWOOD PATH  
APPLE VALLEY, MN 55124  
612-431-1987

EDUCATION:

Undergraduate: B.A. Biology 1976  
Southwest State University, Marshall, MN

Internship - Minnesota Zoo  
Education Department, Fall 1977

Teaching License: Biological Sciences  
Grades: 7-12 1978

Graduate: M.A. Science Education 1989  
University of Minnesota, Mpls., MN

EMPLOYMENT:

1988 - Present Curator of Interpretive Programs  
Minnesota Zoological Garden

1984 - 1988 Curator of Education  
Minnesota Zoological Garden

1981 - 1984 Interpretive Naturalist  
Minnesota Zoological Garden

1978 - 1981 Biology Teacher  
Appleton Public Schools  
Appleton, MN

PROFESSIONAL MEMBERSHIPS:

International Association of Zoo Educators (IZE)

American Association of Zoological Parks and Aquariums (AAZPA)  
Professional Fellow

Minnesota Academy of Science

Minnesota Science Teachers Association

Minnesota Museum Educators Association

Human Dimensions in Wildlife

Consortium of Aquariums, Universities and Zoos (CAUZ)  
Advisory committee member

Loon Watch Advisory Council

Captive Breeding Specialist Group, Species Survival Commission, International Union for Conservation of Nature and Natural Resources (CBSG,SSC,IUCN)

PUBLICATIONS:

Hage, S. and Mellen, J. "Research Methods for Studying Animal Behavior in a Zoo Setting - A Videotape". International Marine Animal Trainers Association 11th Annual Conference Proceedings, 1984.

Mellen, J.D., Hage, S., Pfeifer, S. and Carlson, D. "Research Methods for Studying Animal Behavior in a Zoo Setting". AAZPA Regional Conference Proceedings, 1984.

Hage, S. "Computers, Research and Theatre". AAZPA Annual Conference Proceedings, 1988.

PRESENTATIONS:

Hage, S. "Animal Behavior at a Zoo". National Science Teachers Association Annual Convention, Minneapolis, MN, 1984.

Hage, S. "Computers as Tools in Secondary Science". MECC '85 (Minnesota Educational Computing Corporation Annual Conference), 1985.

Hage, S. and Gennaro, G. "An Analysis of the Verbal and Postural Communication of Zoo Visitors". National Association for Research in Science Teaching Annual Conference, Washington, DC, 1987.

Hage, S. "Educational Research Study at the Minnesota Zoo". Research Methods Class (Science Education), University of Minnesota 1987.

Hage, S. and Martin, S. "Education through Entertainment: Teaching Conservation and Respect for Animals. Ethics of Animals in Our Lives: The Charles B. Sweatt Family Teleconference, University of Minnesota, 1990.

Hage, S. "Speak Easy: Be a Howling Success". First Pan American Congress on Conservation of Wildlife through Education, Caracas, Venezuela, 1990.

Hage, S. "Theater in Zoo Education". First Pan American Congress on Conservation of Wildlife through Education, Caracas, Venezuela, 1990.

Michael W. DonCarlos  
13363 Ferris Avenue So.  
Apple Valley, MN 55124  
612-891-2146

EDUCATION:

1969-1973 University of Illinois, Urbana, IL  
Zoology major, Chemistry/Physics minor  
Bachelor of Science, June 1973

EMPLOYMENT:

1990-current Minnesota Zoological Garden  
13000 Zoo Boulevard  
Apple Valley, MN 55124

Position: Curator

1989-1990 Minnesota Department of Natural Resources  
Division of Fish and Wildlife  
Section of Fisheries  
500 Lafayette Road  
St. Paul, MN 55155-4012

Position: Coldwater Production Supervisor  
(One-year temporary appointment)

1987-1989 Minnesota Zoological Garden

Position: General Curator

1980-1987 Minnesota Zoological Garden

Position: Curator

1978-1980 Minnesota Zoological Garden

Position: Zookeeper

CONSULTATION EXPERIENCE:

1985-1988 Captive breeding consultant for black-footed  
ferret (Mustela nigripes) recovery program.  
Provided critical review and on-site breeding  
management services. Clients: United States Fish  
and Wildlife Service (USFWS) and Wyoming Game and  
Fish Department (WY G&F).

DONCARLOS RESUME 2

1987-1989 Captive breeding consultant for a wolverine (Gulo gulo) reproductive research project. Client: Northwest Trek Wildlife Park, Eatonville, Washington.

PROFESSIONAL MEMBERSHIPS:

Mustelid/Viverrid Specialist Group, Species Survival Commission, International Union for Conservation of Nature and Natural Resources (SSC/IUCN)

Captive Breeding Specialist Group, Species Survival Commission, International Union for Conservation of Nature and Natural Resources (CBSG/SSC/IUCN)

Asian Otter (Aonyx cinerea) Species Survival Plan (SSP) Committee, AAZPA

American Association of Zoological Parks and Aquariums (AAZPA), Professional Fellow

American Fisheries Society

SPECIAL TRAINING:

Completed the course **COLDWATER FISH CULTURE**, offered by the Fisheries Academy of the U.S. Fish and Wildlife Service, Syracuse, NY, October 16-27, 1989.

PUBLICATIONS:

Scientific

Friedman, S., DonCarlos, M., Nelson, M., and House, H. The beaver pond exhibit at the Minnesota Zoo. **INTERNATIONAL ZOO YEARBOOK** 21:247-257, 1981.

Pfeifer, S., Wright, F. and DonCarlos, M. Freeze-branding Beaver Tails. **ZOO BIOLOGY** 3:159-162, 1984.

Pichner, J. and DonCarlos, M. Hatching and Rearing of the Common Loon, (Gavia immer). **AAZPA GREAT LAKES REGIONAL CONFERENCE PROCEEDINGS**, 1986.

DonCarlos, M.W. The Role of Captive Management in the Conservation of the Black-footed Ferret (Mustela nigripes). **AAZPA ANNUAL CONFERENCE PROCEEDINGS**, 1986.

DOMESTIC BIRDS

Captive breeding committees for a variety of birds, reproductive commission for Jack-O'-Lantern, Northwest Fish Wildlife Park, Everett, Washington

PROFESSIONAL MEMBERSHIPS

International Specialist Group, Endangered Species Commission, International Union for Conservation of Nature and Natural Resources (IUCN)
Captive Breeding Specialist Group, Endangered Species Commission, International Union for Conservation of Nature and Natural Resources (IUCN)
Asian Otter (Aonyx cinereus) Species Survival Plan (SSP) Committee, AAZPA
American Association of Zoological Parks and Aquariums (AAZPA), Professional Fellow
American Fisheries Society

SPECIAL TRAINING

Completed the course COLDWATER FISH CULTURE, offered by the Fisheries Academy of the U.S. Fish and Wildlife Service, Syracuse, NY, October 14-21, 1988

PUBLICATIONS

International Zoo Yearbook 21: 247-251, 1984
The Beaver Pond exhibit at the Minnesota Zoo
Fisher, S., Wright, R., and Donahue, M. 1984.
Practical Zoo Biology 3: 15-20, 1984
Fisher, S. and Donahue, M. 1983.
The Common Loon (Gavia immer). AAZPA GREAT LAKES REGIONAL CONFERENCE PROCEEDINGS - 1983
Donahue, M. W. The Role of Artificial Management and the Conservation of the Black-throated Green Warbler. AAZPA ANNUAL CONFERENCE PROCEEDINGS - 1982

DONCARLOS RESUME 3

DonCarlos, M.W., Petersen, J.S., and Tilson, R.L. Captive Biology of an Asocial Mustelid; Mustela erminea. ZOO BIOLOGY 5:363-370, 1986.

DonCarlos, M.W., Miller, B., and Thorne, E.T. The 1986 Black-footed Ferret Captive-breeding Program. In: CONSERVATION BIOLOGY AND THE BLACK-FOOTED FERRET. U.S. Seal, E.T. Thorne, M.A. Bogan, and S.H. Anderson, eds. Yale University Press, 1989.

Miller, B.J., Anderson, S.H., DonCarlos, M.W., and Thorne, E.T. Biology of the Endangered Black-footed Ferret and the Role of Captive Propagation in its Conservation. CANADIAN JOURNAL OF ZOOLOGY, Vol 66:765-773, 1988.

Tilson, R.L., Binczik, G.A, and DonCarlos, M.W. Zoo Science Vs. Zoo VooDoo: Integrating Research with Animal Management. In: WILD MAMMALS IN CAPTIVITY: A GUIDE TO MANAGEMENT. S. Lumpkin, ed., National Zoological Park. In press.

Tilson, R.L., Binczik, G.A., and DonCarlos, M.W. Zoo Science or Zoo Voodoo? The Need for a National Research Coordinator. AAZPA ANNUAL CONFERENCE PROCEEDINGS, 1988.

DonCarlos, M.W., and Petersen, J. Captive Management of the North American Beaver, Castor canadensis. To be published in: PROCEEDINGS OF THE FIFTH INTERNATIONAL THERIOLOGICAL CONGRESS, Rome, Italy, 1989. Invited paper; manuscript in press.

Popular

DonCarlos, M.W. ZooSioux Adventure in September. FRIENDS OF THE MINNESOTA ZOO, Vol. 1, No. 5, 1984. (Ermine)

DonCarlos, M.W., and Pichner, J. Our State Bird Stars at the Minnesota Zoo. FRIENDS OF THE MINNESOTA ZOO, Vol. 3, No. 1, 1986. (Loon)

DonCarlos, M.W. On the Edge: The Black-footed Ferret. MINNESOTA ZOO MAGAZINE, Vol. 1, No. 2, 1986.

DonCarlos, M.W. Minnesota's Winter Wildcat: The Lynx. MINNESOTA ZOO MAGAZINE, Vol. 1, No. 4, 1986.

DonCarlos, M.W. Black-footed Ferret Update. MINNESOTA ZOO MAGAZINE, Vol. 2, No. 4, 1987.

DONCARLOS RESUME

DonCarlos, M.W., Peterson, J.S., and Tabor, H.B. Canine Behavior and Associated Diseases. ZOO BIOLOGY 1988, 7: 1-10.

DonCarlos, M.W., Miller, B., and Tabor, H.B. Black-footed Ferret Canine Prevalence. In CONSERVATION BIOLOGY AND THE BLACK-FOOTED FERRET. Ed. E.T. Searl, M.A. Bogan, and S.H. Anderson. Yale University Press, 1989.

Miller, B.S., Anderson, S.H., DonCarlos, M.W., and Thomas, S.J. Biology of the Endangered Black-footed Ferret and the Role of Canine Prevalence. Conservation CANADIAN JOURNAL OF ZOOLOGY 1987, 65: 1170-1177.

Tabor, H.B., Blacik, D.A., and DonCarlos, M.W. Canine Behavior in Zoo Animals: Implications for Wild Mammals in Captivity. In GUIDE TO MANAGEMENT. Ed. Lamping, G.A. National Zoological Park, in press.

Tabor, H.B., Blacik, G.A., and DonCarlos, M.W. Balance of the Food Web: The Need for a Natural Research Coordinator. AAZPA ANNUAL CONFERENCE PROCEEDINGS, 1988.

DonCarlos, M.W., and Peterson, J.S. Canine Prevalence of the North American Beaver (*Castor canadensis*). Published in: PROCEEDINGS OF THE FIFTH INTERNATIONAL THERIOLOGICAL CONGRESS, Rome, Italy, 1989. In press.

DonCarlos, M.W. Canine Prevalence in the Captivity of BEAVERS OF THE MINNESOTA ZOO. Vol. 1, No. 2, 1988. (Review)

DonCarlos, M.W., and Fisher, J. Canine Prevalence at the Minnesota Zoo. FRIENDS OF THE MINNESOTA ZOO Vol. 3, No. 1, 1988. (Review)

DonCarlos, M.W. Canine Prevalence at the Black-footed Ferret. MINNESOTA ZOO MAGAZINE Vol. 1, No. 1, 1988.

DonCarlos, M.W. Canine Prevalence at Winter White. MINNESOTA ZOO MAGAZINE Vol. 1, No. 2, 1988.

DonCarlos, M.W. Canine Prevalence at the Minnesota Zoo. ZOO MAGAZINE Vol. 1, No. 1, 1987.

DONCARLOS RESUME 4

DonCarlos, M.W. Minnesota's Newest Lake. MINNESOTA ZOO MAGAZINE, Vol. 2, No. 4, 1987.

DonCarlos, M.W. Busy as a Beaver. MINNESOTA ZOO MAGAZINE, Vol. 2, No. 5, 1987.

DonCarlos, M.W., and Holzer, J. Underdogs of the Plains. MINNESOTA ZOO MAGAZINE, Vol. 3, No. 4, 1988. (Prairie dogs)

DonCarlos, M.W. Black-footed Ferret Conservation Update. MINNESOTA ZOO MAGAZINE, Vol. 3, No. 4, 1988.

INVITED LECTURES:

CONSERVATION OF THE BLACK-FOOTED FERRET. Omaha Zoological Society, Omaha, Nebraska. November 13, 1987.

THE ROLE OF CAPTIVE PROPAGATION IN THE CONSERVATION OF THE BLACK-FOOTED FERRET. Fisheries and Wildlife Seminar Series, University of Minnesota. December 3, 1987.

1981  
MINNESOTA ZOO AND AQUARIUM, ST. PAUL, MINNESOTA  
THE BLACK-FOOTED FERRET, *Mustela putorius ferox*, AND ATTEMPTS  
TO REPRODUCE THIS SPECIES IN THE CONSERVATION OF

1982  
CONSERVATION OF THE BLACK-FOOTED FERRET, *Mustela putorius ferox*

REFERENCES

ANDERSON, J.P. 1964. THE BLACK-FOOTED FERRET, *Mustela putorius ferox*, IN  
MINNESOTA ZOO AND AQUARIUM, ST. PAUL, MINNESOTA

(LITERATURE CITED)  
ANDERSON, J.P. 1964. THE BLACK-FOOTED FERRET, *Mustela putorius ferox*, IN  
MINNESOTA ZOO AND AQUARIUM, ST. PAUL, MINNESOTA

ANDERSON, J.P. 1964. THE BLACK-FOOTED FERRET, *Mustela putorius ferox*, IN  
MINNESOTA ZOO AND AQUARIUM, ST. PAUL, MINNESOTA

ANDERSON, J.P. 1964. THE BLACK-FOOTED FERRET, *Mustela putorius ferox*, IN  
MINNESOTA ZOO AND AQUARIUM, ST. PAUL, MINNESOTA

MINNESOTA ZOO AND AQUARIUM

NICOLAS J. REINDL  
6378 195th St. W.  
Farmington, MN 55024

Home phone: 612/463-2534  
Work phone: 612/431-9272

Experience

06/77 - Present

Curator: Minnesota Zoological Garden, Apple Valley, MN 55124. Responsible for the Northern Trail portion of the animal collection. Responsible for the Children's Zoo (Summer Farm) June 1977 - June 1980. Responsible for Animal Commissary June 1977 - 1983. Curatorial responsibilities include daily supervision of animal keeper staff of ten, plus one to three seasonal employees; development and implementation of animal management programs; exhibit expansion, development and installation. Present collection under my supervision is primarily ungulate, but also includes small mammals and carnivores. A close working relationship with all departments is required. I am a member of the propagation group for the AAZPA sponsored Species Survival Plan for Przewalski's horse.

11/75 - 06/77

Zoological Director: Kings Island, Kings Mills, OH 45034. Hired by Taft Broadcasting Company to fill the Zoological Director position of their amusement park at the termination of their contract with Lion Country Safari, Inc. The 100 acre preserve was viewed by over one million visitors per year by way of a UMI monorail system. I was responsible for the zoological operation on the departmental level. Responsibilities included: preparation and administration of the annual operating budget (approximately \$350,000.00 per year), recommendation for Capital Expenditures; maintenance of departmental personnel records; direct activities of departmental staff (12 full-time plus 10 seasonal). I reported directly to the Corporate Zoological Director on professional matters.

07/74 - 11/75

Head Ranger: Lion Country Safari, Kings Dominion, Doswell, VA. Promoted and transferred by Lion Country to Doswell, VA as Head Ranger. Under the direction of the Zoological Manager, I was responsible for the daily operation of the 80 acre preserve and hospital nursery complex. I supervised and scheduled the animal care staff of 12 - 15 full time Rangers, plus seasonal employees. Responsible for training programs including firearms safety, capture and transport of animals, feeding and cleaning, and equipment care. Gained familiarity and proficiency with Palmer Cap-Chur Equipment.

05/73 - 07/74

Assistant Head Ranger: Lion Country Safari, Stockbridge, GA. Assumed the supervisory responsibilities of the Head Ranger during his off-days and vacations. Worked in conjunction with the Veterinarian and Zoological Manager in all aspects of animal care. Expanded animal care experience to include pachyderms, carnivores and primates with some limited experience with the bird collection.

06/72 - 05/73

Ranger (Keeper): Lion Country Safari, Stockbridge, GA. Responsible for the care and maintenance of a portion of the animal collection for the drive-through preserve. Primarily worked with hoof stock and ratites.

#### Education

1978

Oglebay Park, Wheeling, WV. Completed second year AAZPA sponsored Management School, directed by North Carolina State University. Program completed.

1977

Oglebay Park, Wheeling, WV. Completed first year AAZPA sponsored Management School, directed by North Carolina State University.

1970 - 1972

University of Minnesota, College of Biological Sciences. Attained a B.S. Degree in Biological Sciences.

1968 - 1970

Austin State Community College. A.A. Degree; Liberal Arts curriculum.

#### Professional Associations and Community Involvement

Professional Fellow AAZPA since 1978.

Board of Trustees member, American Killifish Association ( an international association of fish hobbyists, over 1,000 members). 1981 - 1983.

National Wildlife Federation

Parish Council member All Saints Catholic Church, Jan. 1985 - 1987.

#### Personal

Born: 1950      Height: 6'1"      Weight: 190 lbs.      Health: Excellent  
Married, two children

Interests include: tropical fish. I have maintained tropical fish as a hobby for over 20 years with a particular interest in the family cyprinodontidae, the killifish. I also have interest in post-war collector's autos, maintaining three post-war autos in various stages of restoration. I have also developed, over the past few summers, a strong horticultural interest which lends itself to family participation.

References

M.S. Silberman, D.V.M.  
Emory University  
Box 23800  
Atlanta, GA 30322

Work phone: 404/634-2590  
Home phone: 404/934-1520  
Weekends: 912/847-4268

Richard B. Aiken  
District Executive  
Boy Scouts of America  
NorthEast Georgia Council  
N.S.C.S. Pound Hall  
Athens, GA 30606

Work phone: 404/548-5293  
Home phone: 404/534-7275

Brad House  
Assistant Director  
Kansas City Zoo  
6700 Zoo Drive  
Kansas City, MO 64132

Work phone: 806/333/7406

Ronald L. Tilson, Ph.D.  
Director of Conservation  
Minnesota Zoological Garden  
13000 Zoo Blvd.  
Apple Valley, MN 55124

Work phone: 612/431-9263  
Home phone: 612/432-8421

Ralph Waterhouse, Director  
Kansas City Zoo  
6700 Zoo Drive  
Kansas City, MO 64132

Work phone: 806/333-7406

Ulyses S. Seal, Ph.D.  
Captive Breeding Specialist Group  
12101 Johnny Cake Ridge Road  
Apple Valley, MN 55124

Work phone: 612/431-9325  
Home phone: 612/888-7267

JIMMY PICHNER  
7802 Whitney Avenue  
Apt. 203  
Apple Valley, MN 55124

Home Phone: 612 431-5690  
Work Phone: 612 431-9278

Experience

June 1987 to  
Present

Curator of Birds: Minnesota Zoological Garden, Apple Valley, MN 55124. Responsible for the direct supervision of four employees and indirectly of 6-10 more. The collection consists of 123 species (525+ specimens) of birds. I am responsible for the maintenance of the main kitchen and for the food and supply budget for the Tropics Trail/Minnesota Trail/and Bird areas at the Zoo as well as the bird budget.

March 1983 to  
June 1987

Tropics Curator: Minnesota Zoological Garden, Apple Valley, MN 55124. Responsible for the care of the tropics animal collection and the supervision of thirteen people. The collection consisted of approximately 70 species of birds (200-300 specimens), 14 species of mammals (148 specimens) and 14 species of reptiles (40 specimens). See attached Position Description.

August 1982 to  
March 1983

Aviculturist: Minnesota Zoological Garden, Apple Valley, MN 55124. Responsible for the care of the tropics avian collection consisting of approximately 70 species (200-300 specimens), and the supervision of three people. Duties included responsibility for all incubation and brooding at the Minnesota Zoo.

February 1978 to  
August 1982

Zookeeper: Minnesota Zoological Garden, Apple Valley, MN 55124. Responsible for the care of the animal collection at the Minnesota Zoo. Directly responsible for the care of the avian collection (tropical and native species), including the incubation/brooding of eggs.

February 1974 to  
May 1978

Preloader: United Parcel Service, Minneapolis, MN. 20-35 hours/week, part-time.

K

Summer 1974

Naturalist: Suburban Recreation Association, Minneapolis, MN 55416. Organized and carried out a mobile nature program (The Zoomobile). Its purpose was to inform and given an appreciation and understanding of nature. The program was based in a van which traveled to playground groups, recreation groups, YMCA and YWCA groups, and Senior Citizen groups. Live animals and study skins were used during the presentation. My partner and I were responsible for all phases of the program; determining goals, acquiring animals and skins, care of animals, subject matter and presentation.

Summer 1973

Manager/Caretaker: Birdwing Farms, Litchfield, MN 55355. Duties consisted of caring for Canada geese and a number of swans, as well as general maintenance of the grounds.

Publications

Pichner, Jimmy and Linda J. Pichner. 1974. Possible nesting of Swainson's hawk in Steele County. The Loon 46(4):172.

Pichner, Jimmy, Mark R. Ryan, and Cedo Zuckweiler. 1976. Fish-feeding behavior in Canada geese. The Loon 48(1):37.

Pichner, Jimmy and Linda J. Pichner. 1978. Townsend's solitaire at Duluth. The Loon 50(4):221.

Pichner, Jimmy. 1985. Brooding and Rearing of North American Waterfowl. Wildlife Rehabilitation Proceedings. Vol. 4:91-94.

Pichner, Jimmy. 1985. Egg Incubation at the Minnesota Zoo. Friends of the Minnesota Zoo. 2(2):1.

DonCarlos, Mike and Jimmy Pichner. 1986. Our State Bird Stars at the Minnesota Zoo. Friends of the Minnesota Zoo. 3(1):1.

Pichner, Jimmy and Michael W. DonCarlos. 1986. Hatching and Rearing of the Common loon (Gavia immer). AAZPA Regional Conference Proceedings 1986. p. 468-472.

Pichner, Jimmy, Michael W. DonCarlos and Jerry Holzer. 1986. Hatching, Rearing and Exhibiting the Common Loon (Gavia immer). American Federation of Aviculture convention 1986.

Swengel, Fredrick B. and Jimmy Pichner. 1987. Status and Management of the Nilgiri Tahr in captivity. AAZPA Regional Conference Proceedings 1987. p. 584-589.

Vorwerk, Larry; Susan Bunn, Perry LaBelle and Jimmy Pichner. 1987. Feeding Adaptations for the Birds. Minnesota Zoo Magazine II(1):6-7.

Pichner Jimmy, Nick Reindl, and Brad Geiszler. 1988. Double Clutching of Trumpeter Swans, CYGNUS CYGNUS BUCCINATOR, at the Minnesota Zoological Garden. Proceedings and Papers of the Eleventh Trumpeter Swan Society Conference. (In Press)

Michael, Gary and Jimmy Pichner. 1988. Going, Going... Minnesota Zoo Magazine III (5):10-11.

Michael, Gary and Jimmy Pichner. 1989 The Pink Phoenix. Minnesota Zoo Magazine IV(1): 6-7.

Pichner, Jimmy. 1989. Free Flight Aviaries: Balancing Display and Conservation. AAZPA Regional Conference Proceedings 1989. P. 167-171.

Pichner, Jimmy Pichner. 1989. White Knights of the Minnesota Zoo. Minnesota Zoo magazine V(5):6-8.

Pichner, Jimmy. 1989. Trumpeter Swan, CYGNUS CYGNUS BUCCINATOR, Multiple and Continuous Clutching: A Summary. Proceedings and Papers of the Twelfth Trumpeter Swan Society Conference. (In Press)

I was a member of a four-member committee that prepared the position paper on trapping, and in particular the steel-jaw trap, for the Minnesota Chapter of the Wildlife Society. The other members of the committee were Peter Jordan, University of Minnesota; Wes Jones, BSWF; and William Longley, MN DNR.

#### Undergraduate Field Research

- |             |   |
|-------------|---|
| Spring 1972 | Stream Ecology Study, LaSalle Creek, Itasca Park, MN                  |
| Spring 1972 | The Eastern belted kingfisher of Itasca Park, MN                      |
| Winter 1973 | Observations of red fox den and bed sites in South Central Minnesota. |
| Spring 1973 | Waterfowl Nesting Study, Carver Park Reserve, Lake III, MN.           |

Education

Owatonna High School (Minnesota), graduated June 1969.

University of Minnesota, graduated June 1973 with a Bachelor of Science Degree in Wildlife Biology.

Professional Associations

American Ornithologists Union  
Minnesota Ornithologists Union  
The Wildlife Society (National Chapter)  
The National Wildlife Federation  
The Wilson Ornithological Society  
The Cooper Ornithological Society  
American Association of Zoological Parks and Aquariums  
The Trumpeter Swan Society

Personal

Born: May 24, 1951  
Height: 5'8" Weight: 150 lbs. Health: Excellent

Interests include: camping, bird watching, fishing, canoeing, writing, photography and other outdoor activities.

Other

Recipient of the 1978 Minnesota Zoological Garden Keeper Excellence Award. The award is presented to an individual in recognition of his/her outstanding contribution as a Keeper at the Minnesota Zoological Garden.

President, Minnesota Zookeepers Association 1980 and 1981.

References

Dr. James A. Cooper  
Prof. (Ent., Fish & Wildlife)  
318 EntFW  
University of Minnesota  
St. Paul, MN 55101

Jimmy Pichner

Page 5

Ronald Johnson, Curator  
Metrozoo Miami  
12400 S.W. 152nd Street  
Miami, FL 33177

Michael W. DonCarlos  
Curator/Minnesota Trail  
13000 Zoo Blvd.  
Apple Valley, MN 55124

Mark R. Ryan, Ph.D.  
School of Forestry  
Fisheries & Wildlife  
112 Stephens Hall  
University of Missouri  
Columbia, MO 65211

Katherine Castle

Minnesota Zoological Garden  
12101 Johnny Cake Ridge Road  
Apple Valley, MN 55124  
(612) 431-9275

CURRENT POSITION Curator/Tropics, Minnesota Zoological Garden:  
November 1987 to present

FORMER POSITIONS Curator of Mammals, Detroit Zoological Park:  
March 1983 to November 1987

Curator of Reptiles, Detroit Zoological Park:  
March 1983 to August 1985

Assistant Curator of Reptiles, Detroit Zoological  
Park: June 1978 to September 1981, July 1982 to  
February 1983

Junior Curator of Reptiles, Detroit Zoological  
Park: April 1977 to May 1978

Zookeeper (Reptiles), Detroit Zoological Park:  
June 1974 to March 1977

Zookeeper (Seasonal), Detroit Zoological Park:  
June 1973 to September 1973, May 1974 to  
June 1974

EDUCATION Bachelor of Science (with distinction), April  
1974, University of Michigan, Ann Arbor

Major: Zoology

ADDITIONAL EDUCATION Graduate Program, Department of Fisheries and  
Wildlife, University of Minnesota, January 1989 to  
present

Wayne State University, graduate work in Biology  
Department, September 1974 to December 1974,  
May 1979 to July 1979

University of Michigan, correspondence credit  
in School of Natural Resources, January 1980 to  
November 1980

Oakland University, credit towards second  
undergraduate degree in School of Nursing,  
September 1980 to May 1982

University of Michigan, extension credit in School of Natural Resources (Conservation Biology Seminar), May 1985

Detroit Hearing and Speech Center (sign language), 1977 to 1978

PROFESSIONAL  
ACTIVITIES

North American Regional Studbook for Chimpanzees (*Pan troglodytes*), Studbook Keeper, April 1986 to June 1989

Species Survival Program Propagation Group Member: Siberian Tiger, Snow Leopard, Scimitar-Horned Oryx, Maned Wolf; 1985-1987

Lion-Tailed Macaque Species Survival Program Propagation Group Member, August 1988 to present

Clouded Leopard Species Survival Program Propagation Group Member, April 1989 to present

AAZPA Bean Award Judge/Mammals 1988

AAZPA Ethics Board, September 1988 to present

Nixon Griffis Fund for Zoological Research, Project Reviewer (single project), August 1988

PUBLICATIONS

The Perils of Pere David's Deer, Detroit Zoological Society Magazine, October 1978

Holden Museum of Living Reptiles (H.M.L.R.) History, Detroit Zoological Society Magazine, Spring 1980

*Chrysemys picta* (Painted Turtle) Coloration, Life History Note, Herpetological Review, March 1982 (senior author James Harding, Cranbrook Institute of Science)

The Birth of a Sea Lion, Detroit Zoological Society Bulletin, Summer 1984

Polar Bear Breeding at the Detroit Zoo, A.A.Z.P.A. Regional Proceedings, 1984

Majestic Mammals, Detroit Zoological Society Bulletin, Spring 1985

Euthanasia of Four Healthy Tigers at Detroit Zoo, A.A.Z.V. Annual Proceedings, October 1985

White Tigers and Species Survival Plans, Tigers of the World; The Biology, Biopolitics, Management, and Conservation of an Endangered Species, 1987

Longevity and Fertility of the Polar Bear, *Ursus maritimus* Phipps, in Captivity, Der Zoologische Garten, volume 57, 1987

Assessment of the Reproductive Status of Chimpanzees in North American Zoos, A.A.Z.P.A. Regional Proceedings, April 1987

1989 North American Regional Chimpanzee Studbook; 1900 - 1986, June 1989

Toward a Demography of Chimpanzees in Captivity, Understanding Chimpanzees, Chicago Academy of Sciences, 1989

PRESENTATIONS

The Challenges of Animal Conservation in Zoos, Sigma Xi Chapter, General Motors Research Laboratories, Warren, Michigan, December 1986

Demographics of Chimpanzee Population in North American Zoos, poster for American Society of Mammalogy Meetings, June 1987, coauthored with S. Raymer

The Detroit's Zoo Chimpanzee Conservation Center; The Evolution of a Chimpanzee Exhibit, A.A.Z.K. Regional Meeting, August 1987

Design Considerations for Mammals in a Tropical Habitat, University of Michigan, School of Natural Resources, February 1988

Analysis of Larger Malayan Chevrotain (*Tragulus napu*) Milk Samples, poster AAZPA Regional Meeting, March 1989, coauthored with B.J. Schoeberl, F. Swengel

Demographics of Chimpanzees in North American Exhibit Facilities 1977-1986, Great Ape Fertility Conference, June 1989, Yerkes Primate Center, Atlanta

#### 14. TRAINING

Staff make extensive use of the state's Department of Employee Relations, Training and Development programs. Development and Career Enhancement courses are available to all levels of zoo staff, and they are all encourage to attend. Staff have taken a number of microcomputer training courses to gain expertise on operating systems, word processing, spreadsheets and database management, averaging between 50-75 such state courses per year.

Staff are also given financial support to attend professional meetings relevant to program needs. In FY89, seven supervisors and four line-staff attended the AAZPA's SSP meetings, five zookeepers attended the American Association of Zookeepers Annual Conference, four Animal Health staff attended their conferences, etc. The goal is to have each professional staff member attend at least one professional meeting.

##### General

The orientation material given to all new permanent employees is attached. During the signing in process, all employees are required to have Right-to-Know training to inform them of any hazards associated with chemicals they use. Currently the Zoo, as per state law, has Material Data Safety sheets on all chemicals used here at the Zoo.

Generally, each supervisor is allowed latitude in their training procedures, although supervisors are held accountable for informing employees of Zoo policies and assuring proper precautions for health and safety are followed.

##### Training procedure for keepers

Each curator has instituted his own method of training keepers, although all are comparable. For instance, on Minnesota Trail, keeper training is supervised by the Zoologist and is primarily on the job training. New keepers are directly supervised by the Zoologist or assigned to work with experienced keepers until they demonstrate sufficient basic skills to work without constant supervision. Occasionally, keepers are assigned to courses offered by the Minnesota Department of Employee Relations.

In the Tropics bird area, when keepers enter the area they first spend time with personnel and become familiar with the Zoo's policies and procedures. The new keeper is then given on-the-job training. The new keeper is teamed with one of the keeper staff and is trained on area procedures. Written materials such as area maps, cleaning and safety procedures, management plans, information on the collection and other pertinent information are provided. The new keeper works with keepers each day until checked off as trained on each procedure. Written reviews at 3, 6 and 12 months discussing the keepers performance are given. Strengths, weaknesses and areas of improvement are discussed.

# WELCOME TO THE MINNESOTA ZOO

You are starting a new career. As you begin learning your new duties and responsibilities, I would like to emphasize how important your work is to the Minnesota Zoological Garden. You will be sharing, with your co-workers, responsibility for assisting in making the MZG an exciting opportunity for visitors to learn about conservation and have fun. Whatever your job, you can make an important contribution to the Zoo's beauty and quality of life.

We prided ourselves over the years on our excellent animal and plant exhibits. In the next decade, our goal is to expand exhibits even further to become the most exciting zoo in the U.S.

In order to serve Minnesota's citizens well, we must find better ways to complete our tasks, more efficient ways to solve our problems and we must listen carefully to public concerns and provide accurate and complete information.

The quality of the MZG programs depends on the Zoo's employees. I am very happy that you are joining us in this exciting work.

*Katherine R. Roberts*

Attached is a copy of a general organizational chart that will help you acquaint yourself with the Minnesota Zoo.

Kathryn Roberts is our **General Director** at the zoo.

There are presently seven divisions into which all zoo employees are organized.

### **Development**

The Development Director position is currently vacant. Activities include Fundraising, Annual and Deferred Giving Programs and the Zoo Foundation.

### **Administration**

This division is headed by Richard Buske, Operations Director. Activities include Finance, Purchasing, Inventory, Mailroom, Physical Plant Operations, MIS and Legislation.

### **Staff Services**

This division is headed by Gloria Heinz, Personnel Director. Activities include Personnel and Labor Relations, Health, Safety and Workers' Compensation, First-Aid, Communications and the Volunteer Program.

### **Strategic Services**

This division is headed by Thomas Williams, Deputy Director. Activities include Planning, Legislative and Zoo Board Relations, Gift Store, Admissions, Building Services, Exhibits/Displays and Communications (including Public Relations, Special Events, Audio/Visual and Marketing).

### **Biological Programs**

This division is headed by Brian Joseph, Biological Programs Director. Activities include all animal handling and animal maintenance responsibilities and Horticulture.

## **Conservation and Education**

This division is headed by Ronald Tilson. Activities include Education, Conservation, Research, SSP and Outreach, Library and Records.

## **Animal Health**

This division is headed by Dr. Peregrine Wolff, Staff Veterinarian. Activities include all medical care for the animal at the Minnesota Zoo.

It will take time for you to become acquainted with each division and the employees that work within each division. Please feel free to ask questions of your supervisor to help you adjust to this new work place.

## BREAKDOWN OF INFORMATION GIVEN AT ORIENTATION

### Salary/Wages

- Salary increases
- Paydays
- Overtime
- Withholding allowances (W-4)

### Fringe Benefits

- Vacation and sick leave
- Holidays
- Retirement
- Deferred Compensation Plan
- Employee Assistance Program

### Insurance Benefits

- Medical and dental insurance
- Life insurance
- Disability insurance
- Beneficiary designation
- Insurance continuation during a leave of absence or layoff

### Job Performance

- Probationary period
- Performance appraisal
- Position description
- Grievance procedures

### Opportunities for advancement

- Transfer and bidding
- Promotional opportunities
- Examinations

### Training Opportunities

- Training at the Zoo
- Training for supervisors
- Training through DOER
- Other training opportunities

Classification of Positions

Initial classification

Changes in classification

How to Get Things Done

Using the telephone

Purchasing

## ORIENTATION INFORMATION

Your supervisor has been given a checklist of items to discuss with you that are very specific to your job. You will also be given a copy of your position description that explains in detail all the responsibilities of your job. Read this very carefully and ask any questions of your supervisor if you are unclear about what is expected of you. Part of the evaluation process during your probationary period involves completing your responsibilities satisfactorily. You will be evaluated two times during your probationary period. Once at the midpoint and again just prior to completing your probationary period. If you don't understand your job, do not hesitate to ask questions. Your supervisor will advise you if your performance is unsatisfactory in an effort for you to improve your performance. Failure to be at work, tardiness or abuse of any leave may be grounds for not meeting probation or for dismissal.

The Minnesota Zoological Garden is an agency of the State of Minnesota. Employees are governed by Minnesota Statutes, Rules and Regulations and applicable bargaining units. Almost all Zoo employees are covered by one of three bargaining agreements. Middle Management Association represents all supervisors. Minnesota Association of Professional Employees (MAPE) represents professional employees. AFSCME, Council 6 represents employees in clerical, technical, craft and labor classifications.

Orientation will be completed on your first day of employment so that you will be advised of your benefits and rights. The personnel office will discuss the following information:

1. Salary and wage information
2. Fringe benefits
  - a. Vacation and sick leave
  - b. Holidays
  - c. Retirement
  - d. Deferred Compensation
  - e. Employee Assistance Program
  - f. Insurance
3. Job Performance
4. Opportunities for Advancement
5. Training Opportunities

6. Classification of positions
7. How to get things done
  - a. Telephone training
  - b. Purchasing
8. Civil Service and Zoo Policies

**MINNESOTA ZOOLOGICAL GARDEN  
EMPLOYMENT INFORMATION**

Employee's Name:

Work Phone:

Work Schedule:

Bargaining Unit:

Class Title:

Employment Condition:

Hourly Salary:

Probationary Period:

Eligible for Insurance:

Classified or Unclassified

Effective Date of Insurance:

Vacation/Sick Leave Accrual Rates:

Appointment End Date (if applicable):

---

Division Head:

Division Title:

Supervisor's Name and Title:

Supervisor's Phone Number:

## *FIRST DAY ORIENTATION CHECKLIST FOR SUPERVISORS*

Supervisors: Please check off each item when you have discussed it with the employee. Cross out items that are not applicable. Both you and your employee should sign the form when you have covered all items. Return it to Staff Services within two weeks of the employee's first day.

### Showing the new employee around:

- Explain parking arrangement.
- Explain department mailing services.
- Give the employee a tour of the office and/or work site.
- Include locations of restrooms, eating areas and bulletin boards.
- Introduce employee to co-workers.
- Instruct employee on use and operation of any equipment.
- Inform employee of smoking/nonsmoking areas at the zoo.
- Inform the employee of which employee evacuation group they will belong in.
- Inform the employee of lunch/break routines.

### Explaining office work rules or policies:

- Explain completion of time book and leave slips.
- Explain hours of work, time and length of coffee breaks and lunch.

### Discussing the job:

- Discuss the employee's job duties and your expectations for performance.
- Give the employee the approximate date of first probationary evaluation.
- Explain safety requirements and inform employee of specific Right to Know Training for the office.

The items checked above have been explained to me and I was given an opportunity to ask questions.

\_\_\_\_\_  
EMPLOYEE'S SIGNATURE

\_\_\_\_\_  
DATE

\_\_\_\_\_  
SUPERVISOR'S SIGNATURE

\_\_\_\_\_  
DATE

## SUPERVISORS

We have prepared an orientation packet to help you introduce your new employees to their jobs and the department. The packet consists of four parts:

1. A brief description of the MZG and its divisions.
2. Information about civil service benefits and requirements will be discussed at orientation. A copy of a zoo magazine and some brochures will also be included.
3. An employee information sheet that lists important parts of the job (classification, pay, probationary period, etc.) and a sheet describing the orientation program.
4. A copy of policies on Affirmative Action, Sexual Harassment, Alcohol and Drug Use, Employee Code of Conduct, Safety Rules, Severe Weather Evacuation and Smoking.

You need to do a couple of things before your new employee begins:

1. Add an updated PD for the employee's position to the folder.
2. Add an organization chart for your work unit, marking the employee's position.

The orientation materials will give new employees background information on the MZG so that you can spend most of your time explaining the job and your work unit. We've prepared a checklist (enclosed in packet) that will remind you of important points to cover. Please check off all the items you (or your staff) discuss with the employee, sign the form, ask the employee to sign it, and return it to Staff Services. Items that are irrelevant to the job can be marked "not applicable" or crossed out.

If you have any suggestions about how the program can work better for supervisors, please call Staff Services and we'll make whatever changes and improvements we can.

## **SPECIAL INSTRUCTIONS FOR UNCLASSIFIED EMPLOYEES**

The State of Minnesota's Civil Services System is divided into classified and unclassified services. Your position is in the unclassified service. These positions need not be filled through the competitive examination process and are typically short in duration.

As an unclassified employee, you do not have bidding rights to positions in your job classification. For example, if you are a Management Analyst 1 in the unclassified service and a Management Analyst 1 position opens up in the classified service, you cannot be considered for the position before candidates from the eligible list (as a classified employee would). You can however, be considered for appointment to the position if you have previously taken the examination for the classification and are currently on the eligible list. If you are not on the list, you cannot be considered.

Obviously, it is in your best interest to take the exams for any job classifications that interest you, including the one you are now in. Once an eligible list is established it is usually used for two or three years, so it is important that you take the examinations when they are announced. If you plan ahead and take as many exams as possible, you will be in a much better position to find another position when yours comes to an end or when you feel you are ready for promotion.

The exam process is sometimes difficult for new employees to understand. The attached brochure may answer some basic questions about the exam process. If you have any further questions, please call Staff Services.

## GENERAL STATEMENTS ABOUT ZOO POLICIES

Listed below are some examples of general statements about the policies by which the Minnesota Zoo and its employees are required to operate. The general statements give a brief description of each policy. As a new employee, it is your responsibility to read each of the policies in full. Copies are enclosed in the orientation folder. In addition, a copy of the Minnesota Zoo's Policy and Procedure Manual can be obtained from the following people:

Gloria Heinz, Staff Services  
Steve Burgstahler, Storeroom  
Ann Seefeldt, Biological Programs  
Pat Natko, Development  
Ginny Bender, Director's Office  
Jan Huwe, Operations  
Dave Lopic, Finance  
Lucinda McCandless, Admissions  
Carole Stead, Animal Health  
Pat Cook, Education

### *GENERAL STATEMENTS*

#### Affirmative Action:

The Minnesota Zoo is committed to actively promoting and providing equal employment opportunities to all employees and job applicants without regard to political or religious affiliation, race, creed, color, national origin, sex, age, marital status, or status without regard to public assistance or disability, except where specific age, sex or physical requirements constitutes a bona fide occupational qualification necessary in safe and efficient administration, or on the basis of the identity, actions or beliefs of a spouse or former spouse.

#### Sexual Harassment:

The Minnesota Zoo believes that sexual harassment has no place in the work environment. Being that sexual harassment is illegal under federal and state law, it is against Zoo policy for any employee or other person to subject another employee or other person to sexual harassment. All

reports of sexual harassment are investigated. Appropriate disciplinary action, up to and including termination, will be instituted against anyone found to have violated the policy. Every employee is required to attend Sexual Harassment Training. New employees must attend within the first year of employment.

#### Alcohol and Other Drug Abuse

The State of Minnesota recognizes that alcoholism and other drug dependencies are a significant social problem with a potential for causing severe effects to the State's workforce. The State recognizes that such chemical dependency may be an illness. Consistent with this understanding, however, the State has an obligation to ensure that its employees perform their jobs effectively, safely and in a professional manner. Prohibitions are listed in the policy. Violations of this policy may constitute just cause for discipline, including possible discharge.

#### Employee Code of Conduct

The intent of the Employee Code of Conduct is to provide a guideline to Zoo employees regarding their role in ensuring that high ethical standards are presented to our visitors, suppliers, customers, fellow employees and all outside business representatives. Failure to comply with the Code provisions could result in disciplinary action. Situations covered under the policy include:

- 1) Offering or accepting gifts, favors or gratuities
- 2) Conflicts of interest
- 3) Safeguarding Zoo property
- 4) Purchases of goods or consultant and professional services
- 5) Devotion of time and ability to the business of the Zoo
- 6) Safeguarding confidential/private information
- 7) Use of Zoo property or equipment for personal use

#### Employee Safety Rules

The Minnesota Zoo has formulated safety rules for the protection of all employees from injury at their workplace and shall comply with all regulations of the Employee Right to Know law.

## Severe Weather Evacuation

The Minnesota Zoo has developed an emergency evacuation procedure for use during severe weather to insure the safety of visitors, staff and zoo animals.

## Smoking Policy

In recognition of the fact that smoking is a serious health hazard to nonsmokers as well as smokers, and that many concerns have been raised by Zoo staff, volunteers and the visiting public, the Minnesota Zoo adopted a smoking policy that will provide a safer, healthier and cleaner indoor environment for employees and volunteers and a safer, healthier and cleaner indoor environment for the enjoyment of our visitors. As of July 1, 1989, the zoo went totally smoke-free indoors, in outdoor public areas and in all Zoo vehicles. Persons found in violation of the smoking policy shall be disciplined under the provisions of the appropriate bargaining agreement and/or plan.

MINNESOTA ZOOLOGICAL GARDEN  
 Estimated Cash Receipts and Cash Disbursements  
 For the Year Ending June 30, 1990

Estimated Revenue

Net earned income

Admission & Parking	\$2,112,932
Membership	297,057
Gift Store	394,831
Monorail	388,866
Animal Acquisition	60,000
Continuing Education	83,757
Zoo Ark	19,800
Concessions	179,040
Facilities Rental	<u>80,946</u>

\$3,617,229

Gifts and Grants

State Grant	7,850,888
Gifts	<u>370,000</u>

8,220,888

Other

Investment Income	150,000
-------------------	---------

150,000

\$11,988,117

Estimated Expense

Operating Expense

Salaries & fringe benefits	\$5,809,113
Supplies & materials	1,218,584
Utilities	697,900
Purchased services	803,850
Other expenses	<u>762,139</u>

\$9,673,960

Equipment & building improvements	2,508,411
-----------------------------------	-----------

2,508,411

\$11,799,997

Income over (under) expense

\$ 188,120

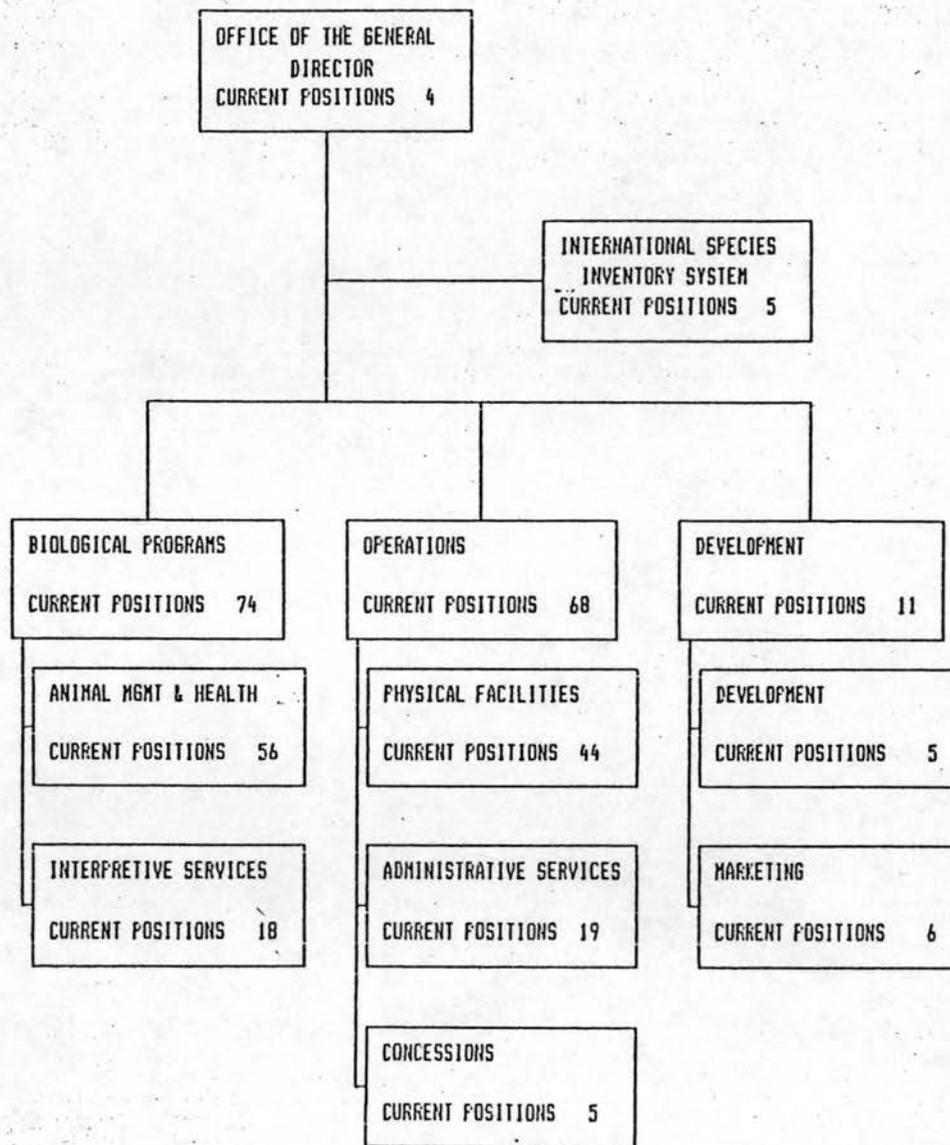
## 1990-91 BIENNIAL BUDGET

PROGRAM STRUCTUREAGENCY: MINNESOTA ZOOLOGICAL GARDEN

<u>PROGRAM</u>	<u>ACTIVITIES</u>	<u>SECTION</u>	<u>PAGE</u>
BIOLOGICAL PROGRAMS-----	Animal Management and Health Interpretive Services	4	983 985
OPERATIONS-----	Physical Facilities Administrative Services Concessions		989 991 993
DEVELOPMENT-----	Development Marketing		997 999
INTERNATIONAL SPECIES INVENTORY SYSTEM-----	International Species Inventory System		1001

MINNESOTA ZOOLOGICAL GARDEN  
ORGANIZATION CHART 7-1-88

<u>POSITION RECONCILIATION</u>		
AUTHORITY:	Current FY 89	Requested For 6-30-91
LEGISLATIVE AUTHORIZED		
GENERAL FUND		
SPECIAL REVENUE		
FEDERAL		
REVOLVING		
AGENCY	162	185
BUDGETARY AUTHORIZED		
SPECIAL REVENUE		
REVOLVING		
TOTAL PERMANENT POSITIONS	162	185
OTHER COMPLEMENT (FTE)		
TOTAL AUTHORIZED POSITIONS	162	185
EMPLOYEES ON 6-30-88	251	



AGENCY PURPOSE:

The Minnesota Zoological Garden (MZG) is a service agency operating a public zoo whose mission is to strengthen the bond between people and the living earth.

The organizational goals of MZG are:

- 1) to provide an exciting, affordable family experience that unobtrusively brings visitors to a heightened awareness of and appreciation for wild-life;
- 2) to operate a high quality recreational facility that serves all citizens of Minnesota;
- 3) to serve as a statewide resource that provides a significant addition to the state's quality of life;
- 4) to provide a multi-disciplinary education and research environment to promote a better understanding of MZG's animal collection; and
- 5) to maximize revenue while increasing attendance.

OPERATIONS AND CLIENTELE:

The MZG attracts over 830,000 visitors annually, 25% of whom are from outside the 7 county metropolitan area and 20% of whom are from out of state. This attendance ranks the MZG in the top 20 of the more than 140 zoos in the United States, the majority of which are located in more densely populated urban areas and/or offer free admission. In addition to annual attendance, the MZG reaches many more persons through a variety of off-site outreach, promotional and educational programs.

The Zoo operates in 3 major program areas:

- 1) Biological Programs provides the animal husbandry, animal health, animal records and research functions as well as the education, horticulture, exhibits and graphics departments necessary to maintain a healthy animal collection, present interesting and informative exhibits and conduct educational programs for all age groups;
- 2) Operations is responsible for the financial management, purchasing, personnel, volunteer programs and first aid, maintenance and year-round operation of the zoo's physical plant and grounds, admissions and gift store operation, and
- 3) Development includes the fund raising, capital development, marketing, public relations, membership, group sales, special events and audio-visual functions necessary to build and maintain public, private and membership support.

BUDGET ISSUES:

The MZG's grant does not include funds for compensation increases due to employee contract negotiations. The following language is recommended for adoption:

"The Minnesota Zoological Garden is eligible for a salary supplement in the same manner as other state agencies. The Commissioner of Finance will determine the amount of salary supplement based on available funds."

OTHER FUNDING CONSIDERATIONS

To supplement the state grant MZG generates revenue from gate receipts, gifts and grants, the operation of a gift store, the monorail, membership programs and facility rental. Earned income represents 55% of the operating budget.

ATTORNEY GENERAL COSTS:

	(Dollars in Thousands)			
	Actual F.Y. 1988	Act/Est F.Y. 1989	Estimate F.Y. 1990	Estimate F.Y. 1991
<u>Fees for Legal Services Rendered</u>				
Fees Assessed	\$ 5	\$ 5	\$	\$
Fee Paid	5	5		
Requested Budget	5	5	3	3

EXPLANATION OF BUDGET REQUEST:

Using a foundation of market research and strategic and long range planning, MZG's Board of Directors has assembled an ambitious and exciting multi-year capital development plan that sets the stage for MZG's first major exhibit and facility construction program since opening in 1978. In addition to new exhibits on the Tropics, Northern, Ocean and Discovery Trails, this plan also makes long-needed improvements in visitor services and comfort. Significant attendance and admissions revenue increases are expected as new exhibits and facilities are opened in the second and subsequent years of the development program.

In the 4 fiscal years since the MZG's funding was converted to a grant, the grant amount has remained constant resulting in a reduction, in constant dollars, of approximately \$725,000. Continuing and increasingly more successful fund raising has enabled MZG to maintain operations at the pre-F.Y. 1986 level, but at the price of virtually no real growth. To assure that existing programs and services are maintained and enhanced while MZG launches its first capital development campaign, an increase in the grant is requested.

<u>INDEX</u>	(Dollars in Thousands)		<u>Page</u>
	<u>Agency Request</u>	<u>Governor's</u>	
	<u>1990-91 Biennium</u>	<u>Recommendation</u>	
	<u>All Funds</u>	<u>All Funds</u>	
<u>BASE Level Request</u>	\$ 22,230	\$ 22,230	
<u>Agency-wide CHANGE Requests</u>			
<u>Increase in Operating Grant</u>	3,421	1,486	979
<u>Subtotal</u>	\$ 3,421	\$ 1,486	
<u>AGENCY Total</u>	\$ 25,651	\$ 23,716	

1990-91 BIENNIAL BUDGET  
(DOLLARS IN THOUSANDS)

AGENCY : ZOOLOGICAL GARDEN

PROGRAM EXPENDITURES:	F.Y. 1990						F.Y. 1991			
	FY 1988	FY 1989	AGENCY REQUEST			GOVERNOR'S RECOMM.	AGENCY REQUEST			GOVERNOR'S RECOMM.
			BASE	CHANGE	TOTAL		BASE	CHANGE	TOTAL	
BIOLOGICAL PROGRAMS	2,714	4,455	3,139	496	3,635	3,338	3,139	544	3,683	3,338
OPERATIONS	5,320	6,533	6,565	571	7,136	7,034	6,565	610	7,175	7,034
ZOO DEVELOPMENT	985	978	1,006	600	1,606	1,156	1,006	600	1,606	1,006
ISIS	339	405	405	0	405	405	405	0	405	405
<b>TOTAL EXPENDITURES</b>	<b>9,358</b>	<b>12,371</b>	<b>11,115</b>	<b>1,667</b>	<b>12,782</b>	<b>11,933</b>	<b>11,115</b>	<b>1,754</b>	<b>12,869</b>	<b>11,783</b>
<b>SOURCES OF FINANCING:</b>										
<b>DIRECT APPROPRIATIONS:</b>										
GENERAL	0	0	4,965	1,667	6,632	5,783	4,965	1,754	6,719	5,633
<b>STATUTORY APPROPRIATIONS:</b>										
ZOOLOGICAL GARDENS	9,358	12,371	6,150	0	6,150	6,150	6,150	0	6,150	6,150
<b>TOTAL FINANCING</b>	<b>9,358</b>	<b>12,371</b>	<b>11,115</b>	<b>1,667</b>	<b>12,782</b>	<b>11,933</b>	<b>11,115</b>	<b>1,754</b>	<b>12,869</b>	<b>11,783</b>
<b>POSITIONS BY FUND:</b>										
ZOOLOGICAL GARDENS	162.0	162.0	162.0	23.0	185.0	172.0	162.0	23.0	185.0	172.0
<b>TOTAL POSITIONS</b>	<b>162.0</b>	<b>162.0</b>	<b>162.0</b>	<b>23.0</b>	<b>185.0</b>	<b>172.0</b>	<b>162.0</b>	<b>23.0</b>	<b>185.0</b>	<b>172.0</b>

CHANGE REQUEST  
 Agency    \_\_\_\_\_ Program    \_\_\_\_\_ Activity    1990-91 Biennial Budget

ACTIVITY: MINNESOTA ZOOLOGICAL GARDEN  
 PROGRAM: MINNESOTA ZOOLOGICAL GARDEN  
 AGENCY: MINNESOTA ZOOLOGICAL GARDEN (MZG)

REQUEST TITLE: INCREASE IN OPERATING GRANT

Agency Request	F.Y. 1990		F.Y. 1991	
	(000's) Amount	Positions	(000's) Amount	Positions
General Fund	\$1,667		\$1,754	
Zoo Fund		23.0		23.0
Governor's Recommendation				
General Fund	\$ 818		\$ 668	
Zoo Fund		10.0		10.0

Request requires statutory change:    \_\_\_\_\_ Yes     No  
 Statutes Affected:

STATEMENT OF REQUEST/OBJECTIVE:

To provide for the increased awareness of MZG's objectives and programs and for the continued enhancement, development and maintenance of the facilities and grounds.

To provide funding assistance for the continued operations of the Minnesota Zoo; for enhancing, developing, and maintaining the Minnesota Zoo's animal exhibits, physical facilities, and grounds; and for increasing the awareness of the Minnesota Zoo's objectives and programs.

DESCRIPTION/BACKGROUND:

Zoos are evolving into a major force in the environmental area on a local and national level as well as internationally. With the ever increasing destruction of habitat for animals in the wild worldwide, Zoos are becoming the last resort for the continued preservation and propagation of animal species. The Minnesota Zoo, as one of the major Zoos in the United States, is actively involved in the preservation and propagation of endangered species by its involvement in the International Species Survival Program (SSP) for 9 species in its animal collection. For example, funding provided by the State in the current fiscal year has assisted the Minnesota Zoo in the development of a Koala exhibit. This exhibit provides the Minnesota Zoo with an opportunity to display an animal that is attractive to visitors as well as to participate in a national effort to preserve and propagate Koalas in captivity.

In addition, the Minnesota Zoo is moving to become more involved in educating the people of Minnesota about the environment and relationship people have with the living earth. In the current biennium, the Minnesota Zoo has acquired the nationally recognized "World of Birds Show" presented by Steve Martin. This presentation provides the opportunity to create an awareness of

environmental concerns in a fun and entertaining manner. Moreover, through gifts from a major corporation of the Zoo has expanded its Children Zoo's area to provide for more interaction with visitors and animals. The expansion of the area will continue through a cooperative effort with the Department of Natural Resources to create a "My Backyard" exhibit which will demonstrate ways to help animals survive in urban areas of the State. With an increase in funding assistance by the State, the Minnesota Zoo will continue and enhance its programs and activities as well as continue its role as a major Zoo in the United States.

STATISTICS:

	F.Y. 1988	F.Y. 1989	F.Y. 1990	F.Y. 1991
No. of species	455	475	500	500
No. of students for self-guided tours	56,148	57,500	58,500	59,500
No. of donors	2,033	2,125	2,250	2,350

RATIONALE:

The operating grant provided by the State to the Minnesota Zoo has remained at a constant level for the last 4 years. Other sources of revenue have enabled the Minnesota Zoo to maintain its existing overall programs and modestly improve certain activities. The increase requested in the operating grant appropriated by the State will assist in providing the Minnesota Zoo with the resources necessary to fulfill its mission to the people of Minnesota.

Summary of CHANGE request:

	F.Y. 1990	F.Y. 1991
Biological Programs - Program	\$ 496	\$ 544
Animal Management and Health-Budget Activity	\$ 395	\$ 437
Positions	11.0	11.0
Interpretive Services-Budget Activity	\$ 101	\$ 107
Positions	6.0	6.0
Operations - Program	\$ 571	\$ 610
Physical Facilities Budget Activity	\$ 542	\$ 559
Positions	3.0	3.0
Administrative Services-Budget Activity	\$ 29	\$ 51
Development - Program		
Marketing-Budget Activity	\$ 600	\$ 600
Positions	2.0	2.0
Development-Budget Activity	\$ 1.0	\$ 1.0
Positions		

CHANGE REQUEST 1990-91 Biennial Budget  
 Agency  Program  Activity  
 (Continuation)

ACTIVITY: MINNESOTA ZOOLOGICAL GARDEN  
 PROGRAM: MINNESOTA ZOOLOGICAL GARDEN  
 AGENCY: MINNESOTA ZOOLOGICAL GARDEN (MZG)

Biological Programs requests increases in funding and positions related to the proposed new exhibits to be constructed during the 1990-91 biennium, as well as the new Koala exhibit that is scheduled to open in the spring of 1989. Seven of the positions requested are for the new exhibits. Also, \$75,000 is requested for the additional animal food costs. Two positions are requested for horticultural operations to assist in the proposed expanded operation to "green the Zoo". Five of the new positions requested are to convert seasonal positions to permanent positions in the Zoo Lab, Children's Zoo, and Skytrail operations. Other positions are requested for animal health and research. Additional funding is also requested for supplies and expenses because of inflation increases of the past 4 years.

Operations requests increases in funding for repair, replacement, and betterment of the physical facilities, equipment, and grounds. Each year over \$1 million in maintenance projects are identified. Items identified for the coming biennium include repairs to the Tropics building roof, animal exhibits and holding areas, roadways, pathways and parking lots; and replacement of horticultural plantings, vehicles and equipment. Funding increases are also needed in the engineering and electrical areas. The 3.0 positions requested are to increase the number of custodians due to the increase in the public areas that will need to be cleaned and maintained. Additional funding is also requested for supplies and expenses because of inflation increases of the past 4 years.

Development requests increases in funding for expanded marketing, advertising, and outreach activities. To maintain the existing attendance base and expand the base through the opening of the new exhibits, the Zoo must be able to communicate effectively with people in Minnesota and out of state about new and exciting activities. Funding is also requested to develop ancillary promotional pieces to be distributed throughout the state as well as on site. Three new positions are requested for the increased activity in the marketing, membership and development.

BASE:	(Dollars in Thousands)			
	F.Y. 1988	F.Y. 1989	F.Y. 1990	F.Y. 1991
General Fund:				
Biological Programs	\$ 1,560	\$ 1,741	\$ 1,768	\$ 1,768
Operations	2,639	2,734	2,776	2,776
Development	416	416	422	422

LONG RANGE FUNDING IMPLICATIONS:	(Dollars in Thousands)		
	F.Y. 1992	F.Y. 1993	Total
General Fund Expenditures	\$ 1,754	\$ 1,754	\$ 3,508

GOVERNOR'S RECOMMENDATION:

The Governor recommends the following CHANGE level amounts:

	(Dollars in Thousands)		
	F.Y. 1990	F.Y. 1991	Positions
Biological Programs	\$ 199	\$ 199	9.0
Operations	469	469	-0-
Development	150	-0-	1.0
	\$ 818	\$ 668	10.0

Biological Programs: The Governor recommends 9.0 of the 17.0 requested positions and \$199,000 each year of the biennium. This includes \$75,000 each year for animal food, \$6,000 each year for additional supplies and expense, \$22,000 each year for an animal health technician position, \$48,000 for 2.0 horticulture positions, and \$10,000 for Horticulture Supplies and Expense. \$38,000 for conversion of 4 part-time zookeepers to full-time, and 2.0 monor-all positions funded from dedicated receipts.

Operations: The Governor recommends \$435,000 each year for major maintenance, repairs and replacements, and \$20,000 each year for additional supplies and expense and \$14,000 each year for Administration expenses.

Development: The Governor recommends \$150,000 in F.Y. 1990 for market research and printing brochures and zoo maps. One additional position is recommended in membership funded from dedicated receipts.

The Governor further recommends that, notwithstanding M.S. 85A.02, Subd. 5b., the Minnesota Zoo should not be exempted from the requirements of M.S. 16A concerning budgeting and payroll.

PROGRAM: BIOLOGICAL PROGRAMS  
Agency: MINNESOTA ZOOLOGICAL GARDEN (MZG)

1990-91 Biennial Budget

PROGRAM PURPOSE:

This program has two purposes: one is to maintain a diverse and healthy collection of exotic animals in social groupings living in naturalistic surroundings; the other is to create an awareness of MZG's mission--to strengthen the bond between people and the living earth. This is accomplished through quality educational programs, creative interpretive displays, demonstrations and interactive experience that imparts a strong conservation ethic. Together these objectives provide the zoo visitor with a fun, exciting and educational experience that ensures their continuing patronage.

OPERATION:

This program encompasses the following functions under 2 primary activities:

- 1) Animal Management, Health and Horticulture; and
- 2) Interpretive Programs.

The Animal Management, Health and Horticultural objectives are met through:

- 1) routine animal management practices for the Zoo's animal collection, including daily feeding and cleaning, breeding introductions on a seasonal basis, and inoculation and preventive veterinary care;
- 2) planning and constructing animal holding and exhibit facilities that meet the needs of the animals, staff and visitors;
- 3) maintaining a healthy and vibrant plant collection that enhances the facility and provides a naturalistic environment for the animals;
- 4) supporting and encouraging conservation activities through in-house projects and cooperative inter-institutional projects; and
- 5) disseminating knowledge of animal management, health, horticultural and conservation activities to zoo professionals worldwide by publishing in scientific journals and popular magazines and by presenting papers and lectures at professional public forums.

Interpretive Programs objectives are met through:

- 1) maintaining a diversity of quality educational programs responsive to zoo visitor's expectations, including preschoolers, organized school groups, gifted students, adults and families;
- 2) operating exciting interactive programs that increase recreational experiences while emphasizing the value of a zoo visit (free flight bird shows, extensive animal contact areas and interpretive demonstrations); and
- 3) instilling a strong conservation ethic through creative interpretation about the animal collection and other endangered and vanishing animals.

EXPLANATION OF BUDGET REQUEST:

The capital development program calls for the construction and opening of several major exhibits during the biennium as well as the implementation of the horticultural master plan and the growth and enhancement of interactive and interpretive programs. These new exhibits and the accompanying increased demand upon support services within Biological Programs (animal health, exhibit shop, horticulture, etc.) necessitates the increase of the complement

by 17.0 positions. Animal Management, Health and Horticulture will increase by 11.0 positions and Interpretive Programs will increase by 6.0 positions.

Funding increases are also requested to provide for the continuing, as well as additional, costs associated with the feeding and health care of the current and proposed expanded animal collection.

GOVERNOR'S RECOMMENDATION:

The Governor recommends a CHANGE level increase of \$199,000 each year and 9.0 new positions for animal management, health and horticulture activities.

1990-91 BIENNIAL BUDGET  
(DOLLARS IN THOUSANDS)

AGENCY : ZOOLOGICAL GARDEN  
PROGRAM : BIOLOGICAL PROGRAMS

ACTIVITY EXPENDITURES:	FY 1988	FY 1989	F.Y. 1990				F.Y. 1991			
			AGENCY REQUEST			GOVERNOR'S RECOMM.	AGENCY REQUEST			GOVERNOR'S RECOMM.
			BASE	CHANGE	TOTAL		BASE	CHANGE	TOTAL	
ANIMAL MGT & HEALTH	1,877	3,511	2,139	395	2,534	2,332	2,139	437	2,576	2,332
A INCREASE IN OPERATING GRANT	GEN			395		193		437		193
INTERPRETIVE SERVICES	837	944	1,000	101	1,101	1,006	1,000	107	1,107	1,006
A INCREASE IN OPERATING GRANT	GEN			101		6		107		6
<b>TOTAL EXPENDITURES</b>	<b>2,714</b>	<b>4,455</b>	<b>3,139</b>	<b>496</b>	<b>3,635</b>	<b>3,338</b>	<b>3,139</b>	<b>544</b>	<b>3,683</b>	<b>3,338</b>
<b>SOURCES OF FINANCING:</b>										
<b>DIRECT APPROPRIATIONS:</b>										
GENERAL	0	0	1,768	496	2,264	1,967	1,768	544	2,312	1,967
<b>STATUTORY APPROPRIATIONS:</b>										
ZOOLOGICAL GARDENS	2,714	4,455	1,371	0	1,371	1,371	1,371	0	1,371	1,371
<b>TOTAL FINANCING</b>	<b>2,714</b>	<b>4,455</b>	<b>3,139</b>	<b>496</b>	<b>3,635</b>	<b>3,338</b>	<b>3,139</b>	<b>544</b>	<b>3,683</b>	<b>3,338</b>
<b>POSITIONS BY FUND:</b>										
ZOOLOGICAL GARDENS	74.8	73.8	73.8	17.0	90.8	82.8	73.8	17.0	90.8	82.8
<b>TOTAL POSITIONS</b>	<b>74.8</b>	<b>73.8</b>	<b>73.8</b>	<b>17.0</b>	<b>90.8</b>	<b>82.8</b>	<b>73.8</b>	<b>17.0</b>	<b>90.8</b>	<b>82.8</b>

ACTIVITY: ANIMAL MANAGEMENT  
Program: BIOLOGICAL PROGRAMS  
Agency: MINNESOTA ZOOLOGICAL GARDEN (MZG)

1990-91 Biennial Budget

PURPOSE:

To provide and maintain natural social groupings of healthy animals exhibiting normal behavior in naturalistic surroundings; to improve existing protocols for the exhibition and maintenance of captive exotic animals; and to disseminate that information through professional, scientific and popular journals and periodicals.

Animal Management, Health and Horticulture encompasses the following activities.

1. Provides routine animal care including feeding, sanitation and manipulation of over 1,700 exotic animals;
2. Maintains adequate animal populations for exhibition through propagation programs, animal acquisition, sale or trade activities;
3. Maintains and protects the health of the animal population through preventive veterinary care, quarantine procedures, prompt veterinary treatment and diagnosis in the event of animal sickness, and adequate pathology performed on all diseased animals;
4. Maintains, monitors and reviews existing animal holding and exhibit facilities and reviews future animal facility designs to ensure their appropriateness;
5. Maintains and improves a healthy plant collection of over 2,000 varieties;
6. Supports conservation activities for endangered species by participating as program coordinators or committee members of Species Survival Plans;
7. Supports research about current animal management or exhibition problems through in-house projects, by soliciting the assistance of outside researchers and by utilizing the resources of area universities; and
8. Communicates with animal care and zoo professionals worldwide to ensure that MZG has access to the best, most recent information relevant to the captive maintenance of exotic animals.

EFFECTIVENESS MEASURES:                    F.Y. 1988   F.Y. 1989   F.Y. 1990   F.Y. 1991

No. of scientific/popular papers published	20	25	30	35
No. of professional presentations	22	26	35	40

STATISTICS:                                    F.Y. 1988   F.Y. 1989   F.Y. 1990   F.Y. 1991

Animal inventory	1,700	1,900	2,500	2,500
No. of species	455	475	500	500
Keeper/animal	1:43	1:40	1:50	1:50

1990-91 BIENNIAL BUDGET  
(DOLLARS IN THOUSANDS)

AGENCY : ZOOLOGICAL GARDEN  
PROGRAM : BIOLOGICAL PROGRAMS  
BUDGET ACTIVITY : ANIMAL MGT & HEALTH

EXPENDITURES:			F.Y. 1990				F.Y. 1991			
	FY 1988	FY 1989	AGENCY REQUEST			GOVERNOR'S RECOMM.	AGENCY REQUEST			GOVERNOR'S RECOMM.
			BASE	CHANGE	TOTAL		BASE	CHANGE	TOTAL	
DETAIL BY CATEGORY:										
STATE OPERATIONS:										
PERSONAL SERVICES	1,503	1,706	1,734	278	2,012	1,842	1,734	278	2,012	1,842
EXPENSES/CONTRACTUAL SRVCS	32	71	71	0	71	71	71	0	71	71
MISC OPERATING EXPENSES	31	29	29	0	29	29	29	0	29	29
SUPPLIES/MATERIALS/PARTS	289	348	298	117	415	383	298	159	457	394
CAPITAL EQUIPMENT	22	57	7	0	7	7	7	0	7	7
REAL PROPERTY	0	1,300	0	0	0	0	0	0	0	0
STATE OPERATIONS	1,877	3,511	2,139	395	2,534	2,332	2,139	437	2,576	2,343
LOCAL ASSISTANCE	0	0	0	0	0	0	0	0	0	<11>
TOTAL EXPENDITURES	1,877	3,511	2,139	395	2,534	2,332	2,139	437	2,576	2,332
CHANGE REQUESTS:										
										FUND
A INCREASE IN OPERATING GRANT										GEN
				395			193	437		193
TOTAL CHANGE REQUESTS				395			193	437		193
SOURCES OF FINANCING:										
DIRECT APPROPRIATIONS:										
GENERAL	0	0	1,332	395	1,727	1,525	1,332	437	1,769	1,525
STATUTORY APPROPRIATIONS:										
ZOOLOGICAL GARDENS	1,877	3,511	807	0	807	807	807	0	807	807
TOTAL FINANCING	1,877	3,511	2,139	395	2,534	2,332	2,139	437	2,576	2,332
POSITIONS BY FUND:										
ZOOLOGICAL GARDENS										
	55.5	55.5	55.5	11.0	66.5	62.5	55.5	11.0	66.5	62.5
TOTAL POSITIONS	55.5	55.5	55.5	11.0	66.5	62.5	55.5	11.0	66.5	62.5

ACTIVITY: INTERPRETIVE PROGRAMS  
Program: BIOLOGICAL PROGRAMS  
Agency: MINNESOTA ZOOLOGICAL GARDE (MZG)

1990-91 Biennial Budget

PURPOSE:

To provide effective interpretation and communication of the natural history, behavior and inter-relationships of the MZG's zoological and horticultural collection to all visitors insuring that significant formal and informal educational experiences are made available to that public.

Interpretive programs are provided by zoo naturalists who are responsible for the design, development, direction and evaluation of all informal and formal educational offerings serving the school districts statewide. Programs and curriculum materials are developed for visiting school groups, teacher in-services, skytrail narration (reaches 34% of all zoo visitors), special classes, volunteer training, internship opportunities, a Speaker's Bureau outreach and specially targeted educational segments such as gifted and foreign language students.

Staff responsible for "Discovery Trail" provide interpretive animal displays and programs through operation of the children's zoo area, daily free-flight bird shows, daily animal demonstrations and the hands-on interactive area called Zoolab. In addition, this activity maintains a selection of animals used for ZooArk outreach, public relations and promotional appearances, educational class usage, and for daily volunteer presentation of interpretive talks to zoo visitors.

<u>EFFECTIVENESS MEASURES:</u>	<u>F.Y. 1988</u>	<u>F.Y. 1989</u>	<u>F.Y. 1990</u>	<u>F.Y. 1991</u>
No. of daily interpretive animal programs	11	13	13	15
No. of hours of public on-site interactive programming	30	40	45	45
% of counties using Zoo-Ark services	52%	70%	70%	70%
% of statewide schools receiving zoo mailing	100%	100%	100%	100%
<u>STATISTICS:</u>	<u>F.Y. 1988</u>	<u>F.Y. 1989</u>	<u>F.Y. 1990</u>	<u>F.Y. 1991</u>
No. of animals available for off-site use	30	50	60	60
No. of students admitted for self-guided tours	56,148	57,500	58,500	59,500
No. of students participating in specialized programs	9,500	10,000	10,000	10,000
No. of teacher in-services held	15	15	15	15
No. of off-site Speaker's Bureau presentations	180	200	200	200
No. of people in Speaker's Bureau presentations	8,224	10,000	10,000	10,000

1990-91 BIENNIAL BUDGET  
(DOLLARS IN THOUSANDS)

AGENCY : ZOOLOGICAL GARDEN  
PROGRAM : BIOLOGICAL PROGRAMS  
BUDGET ACTIVITY : INTERPRETIVE SERVICES

EXPENDITURES:	F.Y. 1990						F.Y. 1991			
	FY 1988	FY 1989	AGENCY REQUEST			GOVERNOR'S RECOMM.	AGENCY REQUEST			GOVERNOR'S RECOMM.
			BASE	CHANGE	TOTAL		BASE	CHANGE	TOTAL	
DETAIL BY CATEGORY:										
STATE OPERATIONS:										
PERSONAL SERVICES	661	796	852	95	947	852	852	95	947	852
EXPENSES/CONTRACTUAL SRVCS	114	82	82	0	82	82	82	0	82	82
MISC OPERATING EXPENSES	11	16	16	0	16	16	16	0	16	16
SUPPLIES/MATERIALS/PARTS	48	45	45	6	51	51	45	12	57	51
CAPITAL EQUIPMENT	2	3	3	0	3	3	3	0	3	3
REDISTRIBUTIONS	1	2	2	0	2	2	2	0	2	2
STATE OPERATIONS	837	944	1,000	101	1,101	1,006	1,000	107	1,107	1,006
LOCAL ASSISTANCE	0	0	0	0	0	0	0	0	0	0
TOTAL EXPENDITURES	837	944	1,000	101	1,101	1,006	1,000	107	1,107	1,006
CHANGE REQUESTS:	FUND									
A INCREASE IN OPERATING GRANT	GEN									
				101		6		107		6
TOTAL CHANGE REQUESTS				101		6		107		6
SOURCES OF FINANCING:										
DIRECT APPROPRIATIONS:										
GENERAL	0	0	436	101	537	442	436	107	543	442
STATUTORY APPROPRIATIONS:										
ZOOLOGICAL GARDENS	837	944	564	0	564	564	564	0	564	564
TOTAL FINANCING	837	944	1,000	101	1,101	1,006	1,000	107	1,107	1,006
POSITIONS BY FUND:										
ZOOLOGICAL GARDENS	19.3	18.3	18.3	6.0	24.3	20.3	18.3	6.0	24.3	20.3
TOTAL POSITIONS	19.3	18.3	18.3	6.0	24.3	20.3	18.3	6.0	24.3	20.3

PROGRAM: OPERATIONS  
Agency: MINNESOTA ZOOLOGICAL GARDEN (MZG)

1990-91 Biennial Budget

Intersection of Zoo Boulevard and TH 77.

PROGRAM PURPOSE:

The Operations Division exists to provide a friendly, safe, attractive and well-maintained visitor environment; to protect and maintain the state's investment in the MZG physical facilities; to provide visitor and staff support services; and to provide concessions for visitor enjoyment as well as income generation.

OPERATION:

This program has 3 budget activities:

- 1) Physical Facilities, which provides maintenance and operational support to all structures, systems, equipment and developed grounds on the 485 acre MZG site to assure functional utility and quality performance.
- 2) Administrative Services, which provides visitor services and administrative support services including finance, personnel, purchasing and inventory control operations.
- 3) Concessions, which provides for the operations of the Gift Store and the Skytrail.

BUDGET ISSUE:

MZG's physical plant, equipment, heating, ventilation and air-conditioning systems (HVAC), and roadways are now over 10 years old. Additional financial resources will be necessary to repair and maintain MZG's facilities and equipment to enable continued performance and functional utility.

EXPLANATION OF BUDGET REQUEST:

During the current biennium major work was completed on the administration building and education wing of the main building complex. Structural problems on the entrance overhangs on the upper plaza were repaired as well as repair of the roofs on the 2 buildings. In addition, repairs to portions of the roadways and plaza areas were completed. A substantial proportion of the repair, replacement and betterment budget was dedicated to the completion of these projects resulting in the deferred maintenance of other areas. The increase requested will result in more projects being completed and better maintenance of MZG.

In addition, the position complement is increased by 3.0 positions in F.Y. 1990 and F.Y. 1991 to provide staff for cleaning and maintaining the additional public areas.

The concession's operating expenses are funded by the revenue earned. In the current biennium, major renovation and repair was made on the Skytrail trains. Funding for the work performed was provided by the excess revenue generated from the operations of the Skytrail. The renovation and repair of the trains has increased their useful life and increased the safety of the trains. Excess revenue generated from the Gift Store has provided the funding in part for the programmatic and design work for the dolphinarium, coral reef/shark, lower level redesign, and the amphitheater. In addition, other capital projects funded from MZG revenue include the re-landscaping of the old Minnesota Zoo entrance and design and construction of new signage at the

GOVERNOR'S RECOMMENDATION:

The Governor recommends a CHANGE level increase of \$469,000 each year for facility maintenance, repairs, replacements and supplies.

1990-91 BIENNIAL BUDGET  
(DOLLARS IN THOUSANDS)

AGENCY : ZOOLOGICAL GARDEN  
PROGRAM : OPERATIONS

ACTIVITY EXPENDITURES:	FY 1988	FY 1989	F.Y. 1990				F.Y. 1991			
			AGENCY REQUEST			GOVERNOR'S RECOMM.	AGENCY REQUEST			GOVERNOR'S RECOMM.
			BASE	CHANGE	TOTAL		BASE	CHANGE	TOTAL	
PHYSICAL FACILITIES	3,097	3,766	3,787	542	4,329	4,242	3,787	559	4,346	4,242
A INCREASE IN OPERATING GRANT	GEN			542		455		559		455
ADMIN SERVICES	1,324	1,369	1,380	29	1,409	1,394	1,380	51	1,431	1,394
A INCREASE IN OPERATING GRANT	GEN			29		14		51		14
CONCESSIONS	899	1,398	1,398	0	1,398	1,398	1,398	0	1,398	1,398
<b>TOTAL EXPENDITURES</b>	<b>5,320</b>	<b>6,533</b>	<b>6,565</b>	<b>571</b>	<b>7,136</b>	<b>7,034</b>	<b>6,565</b>	<b>610</b>	<b>7,175</b>	<b>7,034</b>
<b>SOURCES OF FINANCING:</b>										
<b>DIRECT APPROPRIATIONS:</b>										
GENERAL	0	0	2,775	571	3,346	3,244	2,775	610	3,385	3,244
<b>STATUTORY APPROPRIATIONS:</b>										
ZOOLOGICAL GARDENS	5,320	6,533	3,790	0	3,790	3,790	3,790	0	3,790	3,790
<b>TOTAL FINANCING</b>	<b>5,320</b>	<b>6,533</b>	<b>6,565</b>	<b>571</b>	<b>7,136</b>	<b>7,034</b>	<b>6,565</b>	<b>610</b>	<b>7,175</b>	<b>7,034</b>
<b>POSITIONS BY FUND:</b>										
ZOOLOGICAL GARDENS	68.9	71.6	71.6	3.0	74.6	71.6	71.6	3.0	74.6	71.6
<b>TOTAL POSITIONS</b>	<b>68.9</b>	<b>71.6</b>	<b>71.6</b>	<b>3.0</b>	<b>74.6</b>	<b>71.6</b>	<b>71.6</b>	<b>3.0</b>	<b>74.6</b>	<b>71.6</b>

ACTIVITY: PHYSICAL FACILITIES  
Program: OPERATIONS  
Agency: MINNESOTA ZOOLOGICAL GARDEN (MZG)

1990-91 Biennial Budget

PURPOSE:

To provide attractive and well-maintained public buildings and grounds for the enjoyment and recreational pleasure of visitors to MZG. To repair and maintain MZG's physical plant, operating systems and equipment.

EFFECTIVENESS MEASURES:

	<u>F.Y. 1988</u>	<u>F.Y. 1989</u>	<u>F.Y. 1990</u>	<u>F.Y. 1991</u>
% service orders completed within 10 days	90%	95%	95%	95%
% preventive maintenance tasks completed	97%	98%	98%	100%
% of completed repair, replacement, betterment projects	75%	85%	90%	95%

STATISTICS:

	<u>F.Y. 1988</u>	<u>F.Y. 1989</u>	<u>F.Y. 1990</u>	<u>F.Y. 1991</u>
No. of service orders	1,950	1,800	1,800	1,800
No. of preventive maintenance points	625	625	625	625
No. of motorized vehicles/equipment maintained	105	105	105	105

1990-91 BIENNIAL BUDGET  
(DOLLARS IN THOUSANDS)

AGENCY : ZOOLOGICAL GARDEN  
PROGRAM : OPERATIONS  
BUDGET ACTIVITY : PHYSICAL FACILITIES

EXPENDITURES:	F.Y. 1990						F.Y. 1991			
	FY 1988	FY 1989	AGENCY REQUEST			GOVERNOR'S RECOMM.	AGENCY REQUEST			GOVERNOR'S RECOMM.
			BASE	CHANGE	TOTAL		BASE	CHANGE	TOTAL	
DETAIL BY CATEGORY:										
STATE OPERATIONS:										
PERSONAL SERVICES	1,335	1,510	1,531	89	1,620	1,531	1,531	89	1,620	1,531
EXPENSES/CONTRACTUAL SRVCS	428	160	160	0	160	160	160	0	160	160
MISC OPERATING EXPENSES	744	758	758	0	758	758	758	0	758	758
SUPPLIES/MATERIALS/PARTS	405	614	614	452	1,066	1,066	614	469	1,083	1,066
CAPITAL EQUIPMENT	53	111	111	0	111	111	111	0	111	111
REAL PROPERTY	129	610	610	0	610	610	610	0	610	610
REDISTRIBUTIONS	3	3	3	0	3	3	3	0	3	3
STATE OPERATIONS	3,097	3,766	3,787	541	4,328	4,239	3,787	558	4,345	4,239
LOCAL ASSISTANCE	0	0	0	1	1	3	0	1	1	3
TOTAL EXPENDITURES	3,097	3,766	3,787	542	4,329	4,242	3,787	559	4,346	4,242
CHANGE REQUESTS:										
A INCREASE IN OPERATING GRANT				542		455		559		455
TOTAL CHANGE REQUESTS				542		455		559		455
SOURCES OF FINANCING:										
DIRECT APPROPRIATIONS:										
GENERAL	0	0	1,899	542	2,441	2,354	1,899	559	2,458	2,354
STATUTORY APPROPRIATIONS:										
ZOOLOGICAL GARDENS	3,097	3,766	1,888	0	1,888	1,888	1,888	0	1,888	1,888
TOTAL FINANCING	3,097	3,766	3,787	542	4,329	4,242	3,787	559	4,346	4,242
POSITIONS BY FUND:										
ZOOLOGICAL GARDENS	43.0	44.0	44.0	3.0	47.0	44.0	44.0	3.0	47.0	44.0
TOTAL POSITIONS	43.0	44.0	44.0	3.0	47.0	44.0	44.0	3.0	47.0	44.0

ACTIVITY: ADMINISTRATIVE SERVICES  
Program: OPERATIONS  
Agency: MINNESOTA ZOOLOGICAL GARDEN (MZG)

1990-91 Biennial Budget

PURPOSE:

To direct and manage the operations of the Minnesota Zoo; to provide administrative support services to MZG staff and operations; to provide courteous and appropriate service to MZG visitors; and to manage the MZG volunteer program.

Administrative Services provides the overall management of MZG's activities; provides support services to MZG staff including accounting, budget, inventory control, personnel, and purchasing; provides customer services and collects admission fees; provides first aid services to MZG guests and trains staff in emergency evacuation procedures; and provides volunteers to enhance the guest's experiences.

EFFECTIVENESS MEASURES:

	<u>F.Y. 1988</u>	<u>F.Y. 1989</u>	<u>F.Y. 1990</u>	<u>F.Y. 1991</u>
% Invoices paid within 30 days	98%	98%	98%	98%
Cost per admission processed	\$ .19	\$ .19	\$ .19	\$ .19
Volunteer hours donated (000's)	48	52	60	60
No. of training courses attended	22	35	40	45
% of accounts receivable current	62%	75%	80%	80%

STATISTICS:

	<u>F.Y. 1988</u>	<u>F.Y. 1989</u>	<u>F.Y. 1990</u>	<u>F.Y. 1991</u>
No. of payment transactions	634	650	650	650
Attendance (000's)	822	863	863	863
Volunteer service cost per hour donated	\$ 1.16	\$ 1.34	\$ 1.20	\$ 1.20

REVENUE:

	<u>(Dollars in Thousands)</u>			
	<u>F.Y. 1988</u>	<u>F.Y. 1989</u>	<u>F.Y. 1990</u>	<u>F.Y. 1991</u>
Gate Receipts	\$ 1,618	\$ 1,793	\$ 1,793	\$ 1,793
Other Operating Revenue	268	353	353	353

1990-91 BIENNIAL BUDGET  
(DOLLARS IN THOUSANDS)

AGENCY : ZOOLOGICAL GARDEN  
PROGRAM : OPERATIONS  
BUDGET ACTIVITY : ADMIN SERVICES

EXPENDITURES:			F.Y. 1990			F.Y. 1991				
	FY 1988	FY 1989	AGENCY REQUEST		GOVERNOR'S RECOMM.	AGENCY REQUEST			GOVERNOR'S RECOMM.	
			BASE	CHANGE		TOTAL	BASE	CHANGE		TOTAL
DETAIL BY CATEGORY:										
STATE OPERATIONS:										
PERSONAL SERVICES	979	995	1,006	0	1,006	1,006	1,006	0	1,006	1,006
EXPENSES/CONTRACTUAL SRVCS	178	116	116	0	116	116	116	0	116	116
MISC OPERATING EXPENSES	59	59	59	0	59	59	59	0	59	59
SUPPLIES/MATERIALS/PARTS	25	73	73	29	102	87	73	51	124	87
CAPITAL EQUIPMENT	30	58	58	0	58	58	58	0	58	58
REAL PROPERTY	0	1	1	0	1	1	1	0	1	1
REDISTRIBUTIONS	53	67	67	0	67	67	67	0	67	67
STATE OPERATIONS	1,324	1,369	1,380	29	1,409	1,394	1,380	51	1,431	1,394
LOCAL ASSISTANCE	0	0	0	0	0	0	0	0	0	0
TOTAL EXPENDITURES	1,324	1,369	1,380	29	1,409	1,394	1,380	51	1,431	1,394
CHANGE REQUESTS:										
A INCREASE IN OPERATING GRANT				29		14		51		14
TOTAL CHANGE REQUESTS				29		14		51		14
SOURCES OF FINANCING:										
DIRECT APPROPRIATIONS:										
GENERAL	0	0	876	29	905	890	876	51	927	890
STATUTORY APPROPRIATIONS:										
ZOOLOGICAL GARDENS	1,324	1,369	504	0	504	504	504	0	504	504
TOTAL FINANCING	1,324	1,369	1,380	29	1,409	1,394	1,380	51	1,431	1,394
POSITIONS BY FUND:										
ZOOLOGICAL GARDENS	21.4	22.8	22.8	0.0	22.8	22.8	22.8	0.0	22.8	22.8
TOTAL POSITIONS	21.4	22.8	22.8	0.0	22.8	22.8	22.8	0.0	22.8	22.8

ACTIVITY: CONCESSIONS  
 Program: OPERATIONS  
 Agency: MINNESOTA ZOOLOGICAL GARDEN (HZG)

1990-91 Biennial Budget

PURPOSE:

To operate concessions that enhance the experience of HZG's visitor as well as to provide sources of revenue for improvements to HZG.

In the current biennium, major renovation and repair was made on the Skytrail trains. Funding for the work performed was provided by the excess revenue generated from the operations of the Skytrail. The renovation and repair of the trains has increased their useful life and increased the safety of the trains. Excess revenue generated from the Gift Store has provided the funding in part for the programmatic and design work for the dolphinarium, coral reef/shark, lower level redesign, and the amphitheater. In addition, other capital projects funded from Minnesota Zoo revenue include the re-landscaping of the old Minnesota Zoo entrance and design and construction of new signage at the intersection of Zoo Boulevard and TH 77.

EFFECTIVENESS MEASURES:

	<u>F.Y. 1988</u>	<u>F.Y. 1989</u>	<u>F.Y. 1990</u>	<u>F.Y. 1991</u>
Gift Store sales per visitor	\$ 1.01	\$ .96	\$ .98	\$ .99
Average Gift Store sale	\$ 5.90	\$ 6.15	\$ 6.35	\$ 6.60
No. of Skytrail riders (000's)	287	324	324	324

STATISTICS:

	<u>F.Y. 1988</u>	<u>F.Y. 1989</u>	<u>F.Y. 1990</u>	<u>F.Y. 1991</u>
Number of Gift Store outlets	4	5	6	6
Number of Skytrail trips	5,830	6,500	6,500	6,500
Number of concessions	3	3	3	3

REVENUE:

	<u>(Dollars in Thousands)</u>			
	<u>F.Y. 1988</u>	<u>F.Y. 1989</u>	<u>F.Y. 1990</u>	<u>F.Y. 1991</u>
Gift Store Sales	\$ 833	\$ 830	\$ 846	\$ 854
Skytrail revenue	368	399	400	400
Other concession revenue	119	144	139	139

1990-91. BIENNIAL BUDGET  
(DOLLARS IN THOUSANDS)

AGENCY : ZOOLOGICAL GARDEN  
PROGRAM : OPERATIONS  
BUDGET ACTIVITY : CONCESSIONS

EXPENDITURES:	F.Y. 1990						F.Y. 1991			
	FY 1988	FY 1989	AGENCY REQUEST			GOVERNOR'S RECOMM.	AGENCY REQUEST			GOVERNOR'S RECOMM.
			BASE	CHANGE	TOTAL		BASE	CHANGE	TOTAL	
DETAIL BY CATEGORY:										
STATE OPERATIONS:										
PERSONAL SERVICES	172	161	161	0	161	161	161	0	161	161
EXPENSES/CONTRACTUAL SRVCS	222	81	81	0	81	81	81	0	81	81
MISC OPERATING EXPENSES	30	17	17	0	17	17	17	0	17	17
SUPPLIES/MATERIALS/PARTS	463	447	447	0	447	447	447	0	447	447
CAPITAL EQUIPMENT	5	0	0	0	0	0	0	0	0	0
REAL PROPERTY	3	686	686	0	686	686	686	0	686	686
REDISTRIBUTIONS	4	6	6	0	6	6	6	0	6	6
<b>TOTAL EXPENDITURES</b>	<b>899</b>	<b>1,398</b>	<b>1,398</b>	<b>0</b>	<b>1,398</b>	<b>1,398</b>	<b>1,398</b>	<b>0</b>	<b>1,398</b>	<b>1,398</b>
SOURCES OF FINANCING:										
STATUTORY APPROPRIATIONS:										
ZOOLOGICAL GARDENS	899	1,398	1,398	0	1,398	1,398	1,398	0	1,398	1,398
<b>TOTAL FINANCING</b>	<b>899</b>	<b>1,398</b>	<b>1,398</b>	<b>0</b>	<b>1,398</b>	<b>1,398</b>	<b>1,398</b>	<b>0</b>	<b>1,398</b>	<b>1,398</b>
POSITIONS BY FUND:										
ZOOLOGICAL GARDENS	4.5	4.8	4.8	0.0	4.8	4.8	4.8	0.0	4.8	4.8
<b>TOTAL POSITIONS</b>	<b>4.5</b>	<b>4.8</b>	<b>4.8</b>	<b>0.0</b>	<b>4.8</b>	<b>4.8</b>	<b>4.8</b>	<b>0.0</b>	<b>4.8</b>	<b>4.8</b>

PROGRAM: DEVELOPMENT  
Agency: MINNESOTA ZOOLOGICAL GARDEN (MZG)

1990-91 Biennial Budget

PROGRAM PURPOSE:

The primary objectives of this program are:

- 1) the development and maintenance of a heightened awareness in the private giving community of the needs and benefits of MZG,
- 2) the operation of an aggressive fund raising program to meet those needs,
- 3) operation of the membership and ADOPT programs in order to increase revenue and individual commitment to MZG,
- 4) to operate group sales and special events in order to make MZG a useful and exciting community resource and attract new constituencies to MZG, and
- 5) to market MZG to make its program and services known to the public and therefore increase attendance and revenue.

OPERATION:

Development encompasses those activities directed toward securing and increasing private, visitor and community support for MZG. The program includes the Capital Fund Drive and general fund raising, Membership, Marketing, Public Relations, Special Events and Group Sales.

Since F.Y. 1983, MZG memberships have increased from 3,950 to the current 14,250. Group sales began a program of after-hours facilities rental in mid F.Y. 1987. During the last half of F.Y. 1987 there were 10 after-hours facilities rentals bringing 2,385 additional people to MZG. During F.Y. 1988 there were a total of 43 after-hours facilities rentals involving 6,358 people and bringing MZG additional income of more than \$24,000.

BUDGET ISSUE:

Stable and constant attendance growth is necessary for the continued success of MZG. In order to accomplish this task, additional funding is necessary to provide MZG with the resources necessary to embark on an aggressive and concentrated marketing and advertising program aimed at out-of-state visitors and greater Minnesota residents.

EXPLANATION OF BUDGET REQUEST:

An additional 3.0 positions are requested for F.Y. 1990 and F.Y. 1991 to provide staffing for the expanded marketing program. In addition, funds are requested to increase the promotional and marketing capability of MZG and to provide funds for professional advertising assistance.

GOVERNOR'S RECOMMENDATION:

The Governor recommends a CHANGE level increase of \$150,000 in F.Y. 1990 for market research and printing brochures and zoo maps.

1990-91 BIENNIAL BUDGET  
(DOLLARS IN THOUSANDS)

AGENCY : ZOOLOGICAL GARDEN  
PROGRAM : ZOO DEVELOPMENT

ACTIVITY EXPENDITURES:	FY 1988	FY 1989	F.Y. 1990				F.Y. 1991			
			AGENCY REQUEST			GOVERNOR'S RECOMM.	AGENCY REQUEST			GOVERNOR'S RECOMM.
			BASE	CHANGE	TOTAL		BASE	CHANGE	TOTAL	
ZOO DEVELOPMENT	194	236	240	0	240	240	240	0	240	240
MARKETING	791	742	766	600	1,366	916	766	600	1,366	766
A INCREASE IN OPERATING GRANT				600		150		600		0
<b>TOTAL EXPENDITURES</b>	<b>985</b>	<b>978</b>	<b>1,006</b>	<b>600</b>	<b>1,606</b>	<b>1,156</b>	<b>1,006</b>	<b>600</b>	<b>1,606</b>	<b>1,006</b>
SOURCES OF FINANCING:										
DIRECT APPROPRIATIONS:										
GENERAL	0	0	422	600	1,022	572	422	600	1,022	422
STATUTORY APPROPRIATIONS:										
ZOOLOGICAL GARDENS	985	978	584	0	584	584	584	0	584	584
<b>TOTAL FINANCING</b>	<b>985</b>	<b>978</b>	<b>1,006</b>	<b>600</b>	<b>1,606</b>	<b>1,156</b>	<b>1,006</b>	<b>600</b>	<b>1,606</b>	<b>1,006</b>
POSITIONS BY FUND:										
ZOOLOGICAL GARDENS	13.3	11.6	11.6	3.0	14.6	12.6	11.6	3.0	14.6	12.6
<b>TOTAL POSITIONS</b>	<b>13.3</b>	<b>11.6</b>	<b>11.6</b>	<b>3.0</b>	<b>14.6</b>	<b>12.6</b>	<b>11.6</b>	<b>3.0</b>	<b>14.6</b>	<b>12.6</b>

ACTIVITY: DEVELOPMENT  
Program: DEVELOPMENT  
Agency: MINNESOTA ZOOLOGICAL GARDEN (MZG)

1990-91 Biennial Budget

PURPOSE:

To raise funds from the corporate and private giving communities to expand MZG's exhibit, education and research programs in order to provide a more varied, complete and enjoyable experience for the zoo visitor.

This program is responsible for directing MZG's capital fund drive and general fund raising activities. Plans are currently underway for the improvement and addition of several new exhibits during MZG's second decade of operation. The establishment and success of a capital fund drive is necessary to the completion of this continued expansion, improvement and operation of MZG. It will also be necessary to establish an annual giving program for increased operating costs of this expansion.

STATISTICS:

	<u>F.Y. 1988</u>	<u>F.Y. 1989</u>	<u>F.Y. 1990</u>	<u>F.Y. 1991</u>
% of donors	2,033	2,125	2,250	2,350

REVENUE:

	<u>F.Y. 1988</u>	<u>F.Y. 1989</u>	<u>F.Y. 1990</u>	<u>F.Y. 1991</u>
Gifts and Grants	\$ 301.2	\$ 420.0	\$ 500.0	\$ 500.0
A.D.O.P.T.	\$ 51.9	\$ 60.0	\$ 75.0	\$ 100.0

1990-91 BIENNIAL BUDGET  
(DOLLARS IN THOUSANDS)

AGENCY : ZOOLOGICAL GARDEN  
PROGRAM : ZOO DEVELOPMENT  
BUDGET ACTIVITY : ZOO DEVELOPMENT

EXPENDITURES:	F.Y. 1990						F.Y. 1991			
	FY 1988	FY 1989	AGENCY REQUEST			GOVERNOR'S RECOM1.	AGENCY REQUEST			GOVERNOR'S RECOM1.
			BASE	CHANGE	TOTAL		BASE	CHANGE	TOTAL	
DETAIL BY CATEGORY:										
STATE OPERATIONS:										
PERSONAL SERVICES	148	205	209	0	209	209	209	0	209	209
EXPENSES/CONTRACTUAL SRVCS	20	10	10	0	10	10	10	0	10	10
HISC OPERATING EXPENSES	7	12	12	0	12	12	12	0	12	12
SUPPLIES/MATERIALS/PARTS	15	9	9	0	9	9	9	0	9	9
CAPITAL EQUIPMENT	4	0	0	0	0	0	0	0	0	0
TOTAL EXPENDITURES	194	236	240	0	240	240	240	0	240	240
SOURCES OF FINANCING:										
STATUTORY APPROPRIATIONS:										
ZOOLOGICAL GARDENS	194	236	240	0	240	240	240	0	240	240
TOTAL FINANCING	194	236	240	0	240	240	240	0	240	240
POSITIONS BY FUND:										
ZOOLOGICAL GARDENS	4.5	5.5	5.5	0.0	5.5	5.5	5.5	0.0	5.5	5.5
TOTAL POSITIONS	4.5	5.5	5.5	0.0	5.5	5.5	5.5	0.0	5.5	5.5

ACTIVITY: MARKETING  
Program: DEVELOPMENT  
Agency: MINNESOTA ZOOLOGICAL GARDEN (MZG)

1990-91 Biennial Budget

PURPOSE:

To promote MZG through a variety of programs, services and activities in order to foster a widespread public awareness for and support of MZG that increases attendance and revenue.

Zoo Marketing includes the advertising, market research, membership, public information and publicity, group sales and special events functions and activities at MZG. The entire population of the state is the target audience for the marketing function although the activities and programs are designed to target specific sub-groups of the population. Market research forms the base for all advertising and publicity activities.

Techniques and tools include market analysis and planning; design and production of promotional materials; keeping media, business and cultural communities aware and informed through news articles, press releases and personal appearances; targeted mailings and soliciting membership; promotional campaigns and sales activities for special events and group sales; and active solicitation techniques for corporate ticket sales.

<u>EFFECTIVENESS MEASURES:</u>	<u>F.Y. 1988</u>	<u>F.Y. 1989</u>	<u>F.Y. 1990</u>	<u>F.Y. 1991</u>
# of Media Contacts	225	270	325	385
# of Media Sponsored Promotions	0	4	8	10
# of Market Research Programs	0	3	5	7
<u>STATISTICS:</u>	<u>F.Y. 1988</u>	<u>F.Y. 1989</u>	<u>F.Y. 1990</u>	<u>F.Y. 1991</u>
Memberships	14,250	15,718	17,290	19,020
Special Events	43	58	64	72

1990-91 BIENNIAL BUDGET  
(DOLLARS IN THOUSANDS)

AGENCY : ZOOLOGICAL GARDEN  
PROGRAM : ZOO DEVELOPMENT  
BUDGET ACTIVITY : MARKETING

EXPENDITURES:	FY 1988	FY 1989	F.Y. 1990				F.Y. 1991			
			AGENCY REQUEST			GOVERNOR'S RECOMM.	AGENCY REQUEST			GOVERNOR'S RECOMM.
			BASE	CHANGE	TOTAL		BASE	CHANGE	TOTAL	
<b>DETAIL BY CATEGORY:</b>										
STATE OPERATIONS:										
PERSONAL SERVICES	273	193	217	54	271	217	217	54	271	217
EXPENSES/CONTRACTUAL SRVCS	391	453	453	528	981	603	453	528	981	453
MISC OPERATING EXPENSES	88	61	61	0	61	61	61	0	61	61
SUPPLIES/MATERIALS/PARTS	28	28	28	18	46	28	28	18	46	28
CAPITAL EQUIPMENT	9	5	5	0	5	5	5	0	5	5
REDISTRIBUTIONS	2	2	2	0	2	2	2	0	2	2
STATE OPERATIONS	791	742	766	600	1,366	916	766	600	1,366	766
LOCAL ASSISTANCE	0	0	0	0	0	0	0	0	0	0
<b>TOTAL EXPENDITURES</b>	<b>791</b>	<b>742</b>	<b>766</b>	<b>600</b>	<b>1,366</b>	<b>916</b>	<b>766</b>	<b>600</b>	<b>1,366</b>	<b>766</b>
<b>CHANGE REQUESTS:</b>										
A INCREASE IN OPERATING GRANT					600	150			600	0
<b>TOTAL CHANGE REQUESTS</b>					<b>600</b>	<b>150</b>			<b>600</b>	<b>0</b>
<b>SOURCES OF FINANCING:</b>										
DIRECT APPROPRIATIONS:										
GENERAL	0	0	422	600	1,022	572	422	600	1,022	422
STATUTORY APPROPRIATIONS:										
ZOOLOGICAL GARDENS	791	742	344	0	344	344	344	0	344	344
<b>TOTAL FINANCING</b>	<b>791</b>	<b>742</b>	<b>766</b>	<b>600</b>	<b>1,366</b>	<b>916</b>	<b>766</b>	<b>600</b>	<b>1,366</b>	<b>766</b>
<b>POSITIONS BY FUND:</b>										
ZOOLOGICAL GARDENS	8.8	6.1	6.1	3.0	9.1	7.1	6.1	3.0	9.1	7.1
<b>TOTAL POSITIONS</b>	<b>8.8</b>	<b>6.1</b>	<b>6.1</b>	<b>3.0</b>	<b>9.1</b>	<b>7.1</b>	<b>6.1</b>	<b>3.0</b>	<b>9.1</b>	<b>7.1</b>

PROGRAM: INTERNATIONAL SPECIES INVENTORY SYSTEM      1990-91 Biennial Budget  
Agency: MINNESOTA ZOOLOGICAL GARDEN (HZG)

PROGRAM PURPOSE:

The International Species Inventory System (ISIS) exists to collect, analyze, and disseminate census, vital statistics and pedigree data on wild species in captivity.

OPERATION:

The primary objective is to aid in the long term successful management of these species by providing specific information services. The activity is entirely self-funded from special revenue and grants, pays rent and indirect costs for space and services and requires no General Fund appropriation.

EXPLANATION OF BUDGET REQUEST:

The expenses are funded by the revenue earned.

GOVERNOR'S RECOMMENDATION:

This program is presented for information only and requires no recommendation.

1990-91 BIENNIAL BUDGET  
(DOLLARS IN THOUSANDS)

AGENCY : ZOOLOGICAL GARDEN  
PROGRAM : ISIS

ACTIVITY EXPENDITURES:	FY 1988	FY 1989	F.Y. 1990				F.Y. 1991			
			AGENCY REQUEST			GOVERNOR'S RECOMM.	AGENCY REQUEST			GOVERNOR'S RECOMM.
			BASE	CHANGE	TOTAL		BASE	CHANGE	TOTAL	
ISIS	339	405	405	0	405	405	405	0	405	405
<b>TOTAL EXPENDITURES</b>	<b>339</b>	<b>405</b>	<b>405</b>	<b>0</b>	<b>405</b>	<b>405</b>	<b>405</b>	<b>0</b>	<b>405</b>	<b>405</b>
<b>SOURCES OF FINANCING:</b>										
<b>STATUTORY APPROPRIATIONS:</b>										
ZOOLOGICAL GARDENS	339	405	405	0	405	405	405	0	405	405
<b>TOTAL FINANCING</b>	<b>339</b>	<b>405</b>	<b>405</b>	<b>0</b>	<b>405</b>	<b>405</b>	<b>405</b>	<b>0</b>	<b>405</b>	<b>405</b>
<b>POSITIONS BY FUND:</b>										
ZOOLOGICAL GARDENS	5.0	5.0	5.0	0.0	5.0	5.0	5.0	0.0	5.0	5.0
<b>TOTAL POSITIONS</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>	<b>0.0</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>	<b>0.0</b>	<b>5.0</b>	<b>5.0</b>

## EXHIBITS AND RENOVATIONS

In its first ten years of operation the Minnesota Zoo has established an average annual attendance base of approximately 850,000 people. However for the Zoo to continue to maintain that base and -- more importantly -- to grow, it is critical that we put in place programs and activities that will bring visitors back to the Zoo for repeat visits and new visitors for a first visit. To accomplish this, the Zoo is undertaking the following five projects:

1.	TROPICAL CORAL REEF EXHIBIT	\$2,200,000
2.	OUTDOOR AMPHITHEATER	1,800,000
3.	DOLPHINARIUM	9,000,000
4.	BUILDING RENOVATION	1,000,000
5.	ARCTIC COMPLEX	<u>28,000,000</u>
		\$42,000,000

(See Capital Campaign Brochure in back binder pocket for a fuller description of the above projects.)

In response to a finding from a feasibility study which indicated the private sector is willing to support the new exhibit and renovation projects at the Zoo if that support is coupled with significant funding from the State, the Zoo is embarking on a capital campaign. **The State of Minnesota will be asked to match private gifts on a 3:1 ratio.**

REQUESTS FOR CAPITAL BUDGET

I.	Coral Reef	\$ 2,132,709
II.	Dolphinarium	8,203,607
III.	Arctic Complex	28,940,625
IV.	Lower Level Renovations	1,000,000
V.	Amphitheater	<u>1,740,268</u>
	SUBTOTAL	\$42,017,209
	Plus costs associated with fundraising	300,000
	Plus contingency (2.5%)	<u>1,100,000</u>
		\$43,417,209
	Less legislative appropriation	(1,200,000)
	Less reserves	<u>(1,600,000)</u>
	TOTAL	\$40,617,209

AGENCY: Minnesota Zoological Garden

AGENCY PURPOSE:

The Minnesota Zoological Garden (MZG) is service agency operating a public Zoo whose mission is to strengthen the bond between people and the living earth.

The organizational goals of the MZG are:

- 1) to provide an exciting, affordable family experience that unobtrusively brings visitors to a heightened awareness of and appreciation for wildlife;
- 2) to operate a high quality recreational facility that serves all citizens of Minnesota;
- 3) to serve as a statewide resource that provides a significant addition to the state's quality of life;
- 4) to provide a multi-disciplinary education and research environment to promote a better understanding of MZG's animal collection; and
- 5) to maximize revenue while increasing attendance.

CLIENTELE:

The MZG attracted 940,000 visitors during the past fiscal year, 25% of whom are from outside the 7 county metropolitan area and 20% of whom are from out of state. This attendance ranks the MZG in the top 20 of the more than 140 zoos in the United States, the majority of which are located in more densely populated urban areas and/or offer free admission. In addition to annual attendance, the MZG reaches many more persons through a variety of off-site outreach, promotional and educational programs.

ISSUES:

The MZG's Board, has evaluated the current status of the Zoo and its ability to meet its mission and goals. The Board found that there had been no major capital development or significant planning during the past 10 years. In addition, the departure of the beluga whales left the Zoo without one of its major exhibits. The Board determined that it was necessary to continue the development of a Zoo that provided a unique and affordable family experience as well as bringing visitors to a heightened awareness of and appreciation for wildlife.

CAPITAL DEVELOPMENT PLANNING:

The capital development planning process was initiated by the Zoo Board in the spring of 1987. The Board created a Whale Committee to study and bring forth recommendations regarding the status of whales at the Minnesota Zoo. In addition, the Board also discussed other development priorities that would enable the Zoo to accomplish the goals stated above. The Whale Committee in studying

the many issues regarding maintaining whales in captivity recommended that whales should be reintroduced to the Minnesota Zoo only in a new and more exciting exhibit. The Committee further recommended that the existing whale tank be reconfigured and upgraded to provide for the year round exhibition of the dolphins and the existing dolphin tank in the Tropics Building be reconfigure to a coral reef and shark exhibit. Construction of the Tropical Coral Reef exhibit, which was partially funded by the Legislature, began in October 1989, with anticipated completion in 1991. The completion of this exhibit, along with the dolphinarium, will provide the visitor with exciting and interesting ways to learn about these animals as well as provide the visitors with an entertaining experience. The Board considers these 2 exhibits to be imperative in the revitalization of this area of the Zoo's exhibits.

To further enhance the quality of the Zoo visitors experience, the Board authorized the development of plans to renovate and remodel the area from the parking lots to the main entrance of the Zoo and continuing throughout the lower level concourse. Areas in the concourse to be renovated and remodeled include the admissions area, the Gift Store, Zoolab, and the rest area. These improvements will provide the visitor with an exciting and pleasing atmosphere in arriving and departing the Zoo as well as providing an expanded Zoolab and visitor amenities.

The Board contracted with the Steve Martin "World of Birds Show" two years ago to provide the visitors with an exciting and educational show not only about birds but also worldwide conservation needs. The show has proven to be extremely popular with visitors. Currently, the show is offered in a small amphitheater adjacent to the Children's Zoo. The amphitheater is consistently overcrowded and does not afford a pleasant experience to all the visitors. To correct this problem as well as to expand the variety of educational shows and provide space for other events the Zoo Board authorized the development of plans to construct a larger multipurpose amphitheater. The proposed amphitheater would be located on a site overlooking the Zoo's main lake and across from the existing Siberian Tiger exhibit.

In response to the Whale Committee's recommendation that whales be reintroduced to the Zoo in a new and exciting exhibit, the Zoo Board approved the development of an Arctic complex. The Arctic complex will be located adjacent to the existing Musk Ox Exhibit and at the mid-point of the monorail track on the Northern Trail. This new exhibit will include the Beluga whales as well as other animals from the Arctic ecosystem such as seals, arctic fox, and polar bears. By providing a multi-animal exhibit including the Beluga whales, the Zoo will provide the visitors with an exciting and educational way to learn of the interrelationships of the different animals in the arctic ecosystem.

In January of 1990, an inspection by the State Fire Marshall noted certain deficiencies in Zoo facilities and ordered modifications to the sprinkler and alarm systems. Also in January, a consultant's report recommended a variety of repairs and improvements to adequately maintain the Zoo physical plant.

1989-95 CAPITAL BUDGET SIX-YEAR PLAN - AGENCY NARRATIVE SUMMARY

---

AGENCY: Minnesota Zoological Garden

AGENCY PURPOSE: (CONTINUATION)

FUNDING:

The Governor and the Legislature have established as a goal that the MZG's Board develop a more effective public/private partnership in the operation of the Minnesota Zoo. The MZG Board contracted with a fund raising consultant to determine the extent to which a more effective relationship could be developed with the private sector. The results of the study found that the Minnesota Zoo could anticipate more support of its efforts especially in the area of capital development. The study further stated that the private sector would be interested in developing a more effective relationship with the public sector by contributing financially to the Minnesota Zoo's capital development plans. Therefore, The MZG Board has established as its goal to raise 25% of the costs associated with the capital development plan from the private sector. With the additional 75% from the State, the MZG could proceed with the capital development that is necessary to enable the MZG to accomplish its goals of providing an exciting and entertaining experience for the Zoo's visitors as well as providing the visitors with a heightened awareness of the bond between people and the living earth.

CAPBUD.ANS  
1-30-90 p.m.  
cb

1989-95 CAPITAL BUDGET SIX-YEAR PLAN - SUMMARY  
 DOLLARS IN THOUSANDS (137,522 = 138)

Agency: MN Zoological Garden

Agency Head: Kathryn R. Roberts Capital Budget Officer: Richard Buske

Biennium Requested: 1989-1991

Institution Field Station/ Program	Dept-Wide Priority	Request Title	Capital Cost	Operating Cost	Governor's Recommendation
Minnesota Zoo	1	Fire Safety/Protection	\$ 70		
Minnesota Zoo	2	Physical Plant Mtnc/Imprvmt	908		
Minnesota Zoo	3	Multipurpose Amphitheater	1,305	33	
Minnesota Zoo	4	Main Entrance/Lower Level Renovation	675		
Minnesota Zoo	5	Storm Sewers	208		
Minnesota Zoo	6	Dolphinarium	5,734	150	
			Biennial Totals	\$8,900	

SUMMARY.BIN  
 1-31-90 a.m.  
 cb

BUILDING REQUEST  
1989-91 CAPITAL BUDGET SIX-YEAR PLAN - PROJECT DETAIL  
DOLLARS IN THOUSANDS (137,522 = 138)

Agency: MN Zoological Garden

Facility: Minnesota Zoo

Agency Priority: 1      Biennium Requested: 1989-91

Prior Commitment:  No     Yes      Laws \_\_\_\_\_, Ch \_\_\_\_\_, Sec \_\_\_\_\_ \$ \_\_\_\_\_

Additional Prior Commitment(s)      Laws \_\_\_\_\_, Ch \_\_\_\_\_, Sec \_\_\_\_\_ \$ \_\_\_\_\_

Previously Requested:  No     Yes      When? \_\_\_\_\_

Project Title: Fire Safety/Protection

**Project Description:**

Extension of existing fire sprinkler system in the main building complex and installation of a centralized alarm monitoring station.

**Project Impact:**

The Minnesota Zoo's main building complex which includes the Tropics exhibit, Administration area, and Education area were inspected by the State's Fire Marshall and the Fire Chief of the City of Apple Valley. The State Fire Marshall issued orders which, in accordance with law, the Minnesota Zoo must comply. Orders were issued that require extension of the sprinkler system and installation of a centralized alarm monitoring station. Installation of these items will provide for the Zoo's main building complex to be in compliance with the Minnesota Uniform Fire Code.

FSPROT.BR  
1-30-90 a.m.  
cb

<u>Type of Request</u>	<u>Project Category</u>
<input type="checkbox"/> New Construction	<input checked="" type="checkbox"/> Facility Safety/Integrity
<input type="checkbox"/> Bldg. Improvement	<input type="checkbox"/> Bldg/Oper Efficiency
<input checked="" type="checkbox"/> Code Compliance	<input type="checkbox"/> Program Enhancement
<input type="checkbox"/> Demolition	

**SQUARE FOOTAGE**

New Gross Square Footage. . . . .	_____
New Assignable Square Footage . . . . .	_____
Remodeled Square Footage. . . . .	_____
Demolished Square Footage . . . . .	_____
Net Change in Square Footage. . . . .	_____

**CHANGES IN OPERATING COSTS**

Change in Compensation. . . . .	\$ _____
Change in Complement. . . . .	_____
Change in Building Expense. . . . .	\$ _____
Change in Other Expense . . . . .	\$ _____
Net Change in Operating Cost.....	\$ _____ 0

**PROJECT COSTS**

Land Acquisition. . . . .	\$ _____
New Construction. . . . .	\$ _____
Remodeling. . . . .	\$ _____
Code Compliance . . . . .	\$ _____ 70
Construction Contingency. . . . .	\$ _____
Site Work . . . . .	\$ _____
Design Fees . . . . .	\$ _____
Building Equipment. . . . .	\$ _____
Art Work (1%) . . . . .	\$ _____
Other Project Cost. . . . .	\$ _____

TOTAL PROJECT COST . . . . . \$ \_\_\_\_\_ 70

TOTAL FOR THIS REQUEST ONLY. . . . . \$ \_\_\_\_\_ 70

Data Prepared By: Richard Buske

GOVERNOR'S RECOMMENDATION: \_\_\_\_\_ \$xx,xxx

Funding Source: Direct Appropriation \_\_\_\_\_  
Taxable Bonds \_\_\_\_\_ Tax Exempt Bonds \_\_\_\_\_

BUILDING REQUEST  
 1989-91 CAPITAL BUDGET SIX-YEAR PLAN - PROJECT DETAIL  
 DOLLARS IN THOUSANDS (137,522 = 138)

Agency: MN Zoological Garden

Facility: Minnesota Zoo

Agency Priority: 2      Biennium Requested: 1989-91

Prior Commitment:  No     Yes      Laws \_\_\_\_\_, Ch \_\_\_\_\_, Sec \_\_\_\_\_ \$ \_\_\_\_\_

Additional Prior Commitment(s)      Laws \_\_\_\_\_, Ch \_\_\_\_\_, Sec \_\_\_\_\_ \$ \_\_\_\_\_

Previously Requested:  No     Yes    When? \_\_\_\_\_

Project Title: Physical Plant Maintenance/Improvement

**Project Description:**

Repair and improvement of certain buildings' roofs and parking lots and roadways.

**Project Impact:**

The Minnesota Zoo contracted for an architectural study to determine the repairs and improvements necessary to buildings in the Internal Services area, Tropics building, and Tiger Holding building; public parking lots and roadways. Recommendations of the study require significant repairs to the roofs of the buildings to maintain the building's structural integrity. Repairs and improvements to the public parking lots and roadways are recommended to maintain the useful life and improve public safety.

PPHIMP.BR  
 1-30-89 a.m.  
 cb

<u>Type of Request</u>	<u>Project Category</u>
<input type="checkbox"/> New Construction	<input checked="" type="checkbox"/> Facility Safety/Integrity
<input checked="" type="checkbox"/> Bldg. Improvement	<input checked="" type="checkbox"/> Bldg/Oper Efficiency
<input type="checkbox"/> Code Compliance	<input type="checkbox"/> Program Enhancement
<input type="checkbox"/> Demolition	

**SQUARE FOOTAGE**

New Gross Square Footage . . . . .	_____
New Assignable Square Footage . . . . .	_____
Remodeled Square Footage . . . . .	_____
Demolished Square Footage . . . . .	_____
Net Change in Square Footage . . . . .	0

**CHANGES IN OPERATING COSTS**

Change in Compensation . . . . .	\$ _____
Change in Complement . . . . .	_____
Change in Building Expense . . . . .	\$ _____
Change in Other Expense . . . . .	\$ _____
Net Change in Operating Cost . . . . .	0

**PROJECT COSTS**

Land Acquisition . . . . .	\$ _____
New Construction . . . . .	\$ _____
Remodeling . . . . .	365
Code Compliance . . . . .	\$ _____
Construction Contingency . . . . .	119
Site Work . . . . .	383
Design Fees . . . . .	42
Building Equipment . . . . .	\$ _____
Art Work (1%) . . . . .	\$ _____
Other Project Cost . . . . .	\$ _____

TOTAL PROJECT COST . . . . . \$ 908

TOTAL FOR THIS REQUEST ONLY . . . . . \$ 908

Data Prepared By: Richard Buske

GOVERNOR'S RECOMMENDATION:

\$xx,xxx

Funding Source: Direct Appropriation \_\_\_\_\_  
 Taxable Bonds \_\_\_\_\_ Tax Exempt Bonds \_\_\_\_\_

BUILDING REQUEST  
 1989-91 CAPITAL BUDGET SIX-YEAR PLAN - PROJECT DETAIL  
 DOLLARS IN THOUSANDS (137,522 = 138)

Agency: MN Zoological Garden                      Facility: Minnesota Zoo

Agency Priority: 3      Biennium Requested: 1989-91

Prior Commitment:  No     Yes      Laws \_\_\_\_\_, Ch \_\_\_\_\_, Sec \_\_\_\_\_ \$ \_\_\_\_\_

Additional Prior Commitment(s)                      Laws \_\_\_\_\_, Ch \_\_\_\_\_, Sec \_\_\_\_\_ \$ \_\_\_\_\_

Previously Requested:  No     Yes      When? \_\_\_\_\_

Project Title: MULTIPURPOSE AMPHITHEATER

Project Description:

Construction of a multipurpose amphitheater that will provide permanent seating for approximately 1,500 and standing room for 1,000. Also provides areas for bird holding and staging area for other events.

Project Impact:

The multipurpose amphitheater will provide an exciting opportunity for the Minnesota Zoo to present the nationally acclaimed Steve Martin's "World of Birds Show" as well as other animal shows that provide entertainment, education, and conservation messages to the Zoo's visitors. The theater will also expand the Zoo's ability to rent the facilities for after hours events and generate additional revenue. In addition, the theater will provide the Zoo with expanded opportunities to present musical and other performing arts during Zoo hours.

AMPHITBR.BIN  
 1-30-90 p.m.  
 cb

<u>Type of Request</u>	<u>Project Category</u>
<input checked="" type="checkbox"/> New Construction	<input type="checkbox"/> Facility Safety/Integrity
<input type="checkbox"/> Bldg. Improvement	<input type="checkbox"/> Bldg/Oper Efficiency
<input type="checkbox"/> Code Compliance	<input checked="" type="checkbox"/> Program Enhancement
<input type="checkbox"/> Demolition	

SQUARE FOOTAGE

New Gross Square Footage . . . . .	61,200
New Assignable Square Footage . . . . .	_____
Remodeled Square Footage . . . . .	_____
Demolished Square Footage . . . . .	_____
Net Change in Square Footage . . . . .	61,200

CHANGES IN OPERATING COSTS

Change in Compensation . . . . .	\$ 30
Change in Complement . . . . .	1.5
Change in Building Expense . . . . .	3
Change in Other Expense . . . . .	\$ _____
Net Change in Operating Cost . . . . .	\$ 33

PROJECT COSTS

Land Acquisition . . . . .	\$ _____
New Construction . . . . .	1,640
Remodeling . . . . .	\$ _____
Code Compliance . . . . .	\$ _____
Construction Contingency . . . . .	\$ _____
Site Work . . . . .	\$ _____
Design Fees . . . . .	100
Building Equipment . . . . .	\$ _____
Art Work (1%) . . . . .	\$ _____
Other Project Cost . . . . .	\$ _____

TOTAL PROJECT COST . . . . . \$ 1,740

TOTAL FOR THIS REQUEST ONLY. . . . . \$ 1,305

Data Prepared By: Richard Buske

GOVERNOR'S RECOMMENDATION: \$xx,xxx

Funding Source: Direct Appropriation \_\_\_\_\_  
 Taxable Bonds \_\_\_\_\_ Tax Exempt Bonds \_\_\_\_\_ in

BUILDING REQUEST  
1989-91 CAPITAL BUDGET SIX-YEAR PLAN - PROJECT DETAIL  
DOLLARS IN THOUSANDS (137,522 = 138)

Agency: MN Zoological Garden      Facility: Minnesota Zoo

Agency Priority: 4      Biennium Requested: 1989-91

Prior Commitment:  No     Yes      Laws \_\_\_\_\_, Ch \_\_\_\_\_, Sec \_\_\_\_\_ \$ \_\_\_\_\_

Additional Prior Commitment(s)      Laws \_\_\_\_\_, Ch \_\_\_\_\_, Sec \_\_\_\_\_ \$ \_\_\_\_\_

Previously Requested:  No     Yes      When? \_\_\_\_\_

Project Title: MAIN ENTRANCE/LOWER CONCOURSE RENOVATION

**Project Description:**

This program will be directed at major renovation of the main entrance and first floor concourse of the Zoo. The primary focus will be the addition and enhancement of visitor amenities in the principle non-exhibit area public spaces.

**Project Impact:**

Virtually every Zoo visitor passes through and/or spends time in the first floor concourse area. Admissions, Guest Services, Gift Store, Zoolab, Orientation Theater and food service operate in this area. Broad-based market research, membership surveys and visitor opinion polls have clearly identified that lack of proper visitor comforts and services and the general "coldness" and "hardness" of the Zoo buildings all contribute significantly to an overall negative attitude toward and experience of the Zoo. Zoo visitors lodge very few complaints about the animals and the exhibits themselves, but criticize the Zoo most often for not taking good care of the visitor.

Renovation of the gift store will provide greater opportunity for increasing revenues because the store will function more efficiently, be larger and will be considerably more attractive than at present.

Zoolab, one of the most popular exhibit areas, is in need of significant renovation to expand the public spaces and to improve animal exhibits and holding areas. This project will allow Zoolab to offer a greater number of animals and to develop new exhibits.

This project will result in a fun, comfortable and entertaining atmosphere in the main building public spaces that will promote pleasant visitor experiences.

MAINENBR.BIN  
1-30-90 p.m.  
cb

Type of Request	Project Category
<input type="checkbox"/> New Construction	<input type="checkbox"/> Facility Safety/Integrity
<input checked="" type="checkbox"/> Bldg. Improvement	<input checked="" type="checkbox"/> Bldg/Oper Efficiency
<input type="checkbox"/> Code Compliance	<input checked="" type="checkbox"/> Program Enhancement
<input type="checkbox"/> Demolition	

**SQUARE FOOTAGE**

New Gross Square Footage . . . . .	_____
New Assignable Square Footage . . . . .	_____
Remodeled Square Footage . . . . .	232,560
Demolished Square Footage . . . . .	_____
Net Change in Square Footage . . . . .	_____

**CHANGES IN OPERATING COSTS**

Change in Compensation . . . . .	\$ 0
Change in Complement . . . . .	0
Change in Building Expense . . . . .	0
Change in Other Expense . . . . .	0
Net Change in Operating Cost . . . . .	0

**PROJECT COSTS**

Land Acquisition . . . . .	\$ _____
New Construction . . . . .	\$ _____
Remodeling . . . . .	\$ 900
Code Compliance . . . . .	\$ _____
Construction Contingency . . . . .	\$ _____
Site Work . . . . .	\$ _____
Design Fees . . . . .	\$ 100
Building Equipment . . . . .	\$ _____
Art Work (1%) . . . . .	\$ _____
Other Project Cost . . . . .	\$ _____

TOTAL PROJECT COST . . . . . \$ 1,000

TOTAL FOR THIS REQUEST ONLY . . . . . \$ 675

Data Prepared By: Richard Buske

GOVERNOR'S RECOMMENDATION: \$xx,xxx

Funding Source: Direct Appropriation \_\_\_\_\_  
Taxable Bonds \_\_\_\_\_ Tax Exempt Bonds \_\_\_\_\_

BUILDING REQUEST  
 1989-91 CAPITAL BUDGET SIX-YEAR PLAN - PROJECT DETAIL  
 DOLLARS IN THOUSANDS (137,522 = 138)

Agency: MN Zoological Garden

Facility: Minnesota Zoo

Agency Priority: 5      Biennium Requested: 1989-91

Prior Commitment:  No     Yes      Laws \_\_\_\_\_, Ch \_\_\_\_\_, Sec \_\_\_\_\_ \$ \_\_\_\_\_

Additional Prior Commitment(s)      Laws \_\_\_\_\_, Ch \_\_\_\_\_, Sec \_\_\_\_\_ \$ \_\_\_\_\_

Previously Requested:  No     Yes      When? \_\_\_\_\_

Project Title: Storm Sewers

**Project Description:**

Construction of storm sewers to drain excess water from the Minnesota Zoo's main lake.

**Project Impact:**

The Minnesota Zoo has in place a partial storm sewer drainage system. this storm sewer system drains storm water from the public parking lots, pathways, and plaza areas into the main lake. During the spring season and periods of intense water fall the main lake raised to levels that endanger the existing Zoo facilities that are adjacent to the lake. With the proposed construction of the dolphinarium and the multi-purpose amphitheater adjacent to the lake it will be necessary to manage the lake level to ensure that the lake level will not exceed a certain level. Completion of the storm sewer system on the Minnesota Zoo grounds will resolve the problems associated with high lake levels.

GARDEN.BR  
 1-30-90 p.m.  
 cb

<u>Type of Request</u>	<u>Project Category</u>
<input checked="" type="checkbox"/> New Construction	<input checked="" type="checkbox"/> Facility Safety/Integrity
<input type="checkbox"/> Bldg. Improvement	<input checked="" type="checkbox"/> Bldg/Oper Efficiency
<input type="checkbox"/> Code Compliance	<input type="checkbox"/> Program Enhancement
<input type="checkbox"/> Demolition	

**SQUARE FOOTAGE**

New Gross Square Footage. . . . .	_____
New Assignable Square Footage . . . . .	_____
Remodeled Square Footage. . . . .	_____
Demolished Square Footage . . . . .	_____
Net Change in Square Footage. . . . .	_____

**CHANGES IN OPERATING COSTS**

Change in Compensation. . . . .	\$ _____
Change in Complement. . . . .	_____
Change in Building Expense. . . . .	\$ _____
Change in Other Expense . . . . .	\$ _____

**PROJECT COSTS**

Land Acquisition. . . . .	\$ _____
New Construction. . . . .	\$ <u>208</u>
Remodeling. . . . .	\$ _____
Code Compliance . . . . .	\$ _____
Construction Contingency. . . . .	\$ _____
Site Work . . . . .	\$ _____
Design Fees . . . . .	\$ _____
Building Equipment. . . . .	\$ _____
Art Work (1%) . . . . .	\$ _____
Other Project Cost. . . . .	\$ _____

**TOTAL PROJECT COST . . . . .** \$ 208

**TOTAL FOR THIS REQUEST ONLY. . . . .** \$ 208

Data Prepared By: Richard C. Buske

**GOVERNOR'S RECOMMENDATION:** \_\_\_\_\_ \$xx,xxx

Funding Source: Direct Appropriation \_\_\_\_\_

Taxable Bonds \_\_\_\_\_ Tax Exempt Bonds \_\_\_\_\_

BUILDING REQUEST  
1989-91 CAPITAL BUDGET SIX-YEAR PLAN - PROJECT DETAIL  
DOLLARS IN THOUSANDS (137,522 = 138)

Agency: MN Zoological Garden

Facility: Minnesota Zoo

Agency Priority: 6

Biennium Requested: 1989-91

Prior Commitment:  No  Yes    Laws \_\_\_\_\_, Ch \_\_\_\_\_, Sec \_\_\_\_\_ \$ \_\_\_\_\_

Additional Prior Commitment(s)    Laws \_\_\_\_\_, Ch \_\_\_\_\_, Sec \_\_\_\_\_ \$ \_\_\_\_\_

Previously Requested:  No  Yes    When? \_\_\_\_\_

Project Title: DOLPHINARIUM

**Project Description:**

The Minnesota Zoological Garden's Dolphinarium will provide a year-round home for 6-8 bottlenose dolphins in a renovation of the former beluga whale facility. The dome enclosed building will provide stadium seating for almost 900 people overlooking the main show pool, which will have a tropical island backdrop. The interior will provide a light and airy feeling with clear panels in a major portion of the dome providing light from the sky. With renovated water treatment systems, an additional holding pool, and state-of-the-art marine mammal husbandry facilities, the dolphinarium will provide a superb home for its dolphin inhabitants. The circular building, which will stand out on a scale rivaling the existing tropics building will become a major new architectural focal point for the Minnesota Zoo.

**Project Impact:**

Bottlenose dolphins have long been the most popular and versatile performers of any captive marine mammals. The Minnesota Zoo's two bottlenose dolphins provide an extremely popular exhibit whether viewed during summer performances in the former beluga pool or winter performances in the tropics pool, despite problems with both exhibit which include poor viewing conditions, little viewing space, and poor sound amplification capabilities. All these factors severely hamper the ability of staff and dolphins to give, and visitors to appreciate, quality presentations demonstrating the unique natural history and adaptations of marine mammals.

The new dolphinarium will solve these problems for Minnesota Zoo visitors on a permanent year-round basis. It will provide seating for large crowds of people in a comfortable, exciting environment overlooking a pool redesigned to enhance the effectiveness of dolphin trainers working with the animals and to highlight the animals as they perform in full easy view of the whole audience. A quality sound system will carry the excitement as well as the educational message of the dolphin show.

The proposed exhibit will provide a superb view of the activities of an expanded pod of dolphins living in a healthful, state-of-the-art marine mammal facility. The larger group will allow the animals a full range of social interactions and, although the reproductive behavior of individual dolphins cannot be predicted, the facility is designed to provide the requisites for successful breeding of dolphins.

DOLPHIBR.BIN  
1-30-90 p.m.  
cb

Type of Request	Project Category
<input type="checkbox"/> New Construction	<input checked="" type="checkbox"/> Facility Safety/Integrity
<input checked="" type="checkbox"/> Bldg. Improvement	<input checked="" type="checkbox"/> Bldg/Oper Efficiency
<input type="checkbox"/> Code Compliance	<input checked="" type="checkbox"/> Program Enhancement
<input type="checkbox"/> Demolition	

**SQUARE FOOTAGE**

New Gross Square Footage . . . . .	_____
New Assignable Square Footage . . . . .	_____
Remodeled Square Footage . . . . .	36,581
Demolished Square Footage . . . . .	_____
Net Change in Square Footage . . . . .	_____

**CHANGES IN OPERATING COSTS**

Change in Compensation . . . . .	\$ 110
Change in Complement . . . . .	4.5
Change in Building Expense . . . . .	\$ 15
Change in Other Expense . . . . .	\$ 25
Net Change in Operating Cost . . . . .	\$ 150

**PROJECT COSTS**

Land Acquisition . . . . .	\$ _____
New Construction . . . . .	\$ _____
Remodeling . . . . .	\$ 7,746
Code Compliance . . . . .	\$ _____
Construction Contingency . . . . .	\$ 660
Site Work . . . . .	\$ _____
Design Fees . . . . .	\$ 663
Building Equipment . . . . .	\$ _____
Art Work (1%) . . . . .	\$ _____
Other Project Cost . . . . .	\$ _____

TOTAL PROJECT COST . . . . . \$ 9,069

TOTAL FOR THIS REQUEST ONLY . . . . . \$ 5,734

Data Prepared By: Richard Buske

GOVERNOR'S RECOMMENDATION: \$xx,xxx

Funding Source: Direct Appropriation \_\_\_\_\_  
Taxable Bonds \_\_\_\_\_ Tax Exempt Bonds \_\_\_\_\_

22. Capital Improvements Since 1985 Reaccreditation Inspection

(Figures taken from audited financial statements for FY1986 through FY1989)

FY86	\$271,376
FY87	462,154
FY88	128,182
FY89	<u>1,024,353</u> (not including \$962,630
construction in progress)	
	<b>\$1,886,065</b>

# MINNESOTA ZOOLOGICAL GARDEN

## MAINTENANCE AND IMPROVEMENT PROGRAM

### 5-YEAR BUDGET

MINNESOTA ZOOLOGICAL GARDEN PHYSICAL PLANT MAINTENANCE & IMPROVEMENT STUDY 5-YEAR BUDGET FOR FACILITIES MAINTENANCE PROGRAM	1991	1992	1993	1994	1995	ROOF REPLACEMENT ALTERNATE RECOMMENDED BETWEEN YEARS 2000-2005
<b>PART 1</b>						
<b>ROOF AND MASONRY REHABILITATION</b>						
*BUILDING 'A' - ANIMAL HEALTH & RESEARCH	\$37,100	\$500		\$ 4,600		\$ 66,000
*BUILDING 'B' - SHOPS	\$39,400	\$500		\$ 3,200		\$ 122,400
*BUILDING 'C' - VEHICLE MAINTENANCE	\$15,000	\$500		\$ 3,000		\$ 26,000
*TROPICS BUILDING	\$231,400	\$600		\$ 16,600		\$ 860,000
*NURSERY/TIGER DEN	\$17,500	\$300		\$ 2,500		\$ 42,000
CONSTRUCTION COST	\$341,200			\$ 29,900		\$1,116,400
ENGINEERING DESIGN	\$ 20,500			\$ 2,000		\$ 67,000
CONSTRUCTION ADMINISTRATION	\$ 23,800			\$ 2,500		\$ 78,000
SUBTOTAL	\$385,000	\$ 2,400		\$34,400		\$1,261,400
CONTINGENCY @ 15%	\$ 50,000	\$ 460		\$ 5,200		\$ 189,200
<b>TOTAL ROOFS &amp; MASONRY REHAB.</b>	<b>\$443,500</b>	<b>\$ 2,800</b>		<b>\$39,600</b>		<b>\$1,450,600</b>
<b>PART 2</b>						
<b>PAVED AREAS</b>						
*MAIN PARKING LOTS A,B,D, AND E	\$ 79,400		\$38,800	\$35,100	\$100,400	
*MAIN PARKING LOT PERIMETER DRIVE	\$ 16,200		\$10,400	\$9,700	\$ 43,300	
*EAST AND SOUTH DOUBLE DRIVES				\$59,200		
*INTERNAL SERVICES AND MANAGEMENT COMPLEX		\$ 13,000	\$53,200			
*HEATING PLANT ROAD (NORTH & EAST SECTIONS)		\$180,000		\$4,600		
*TROPICS BUILDING SERVICE AREA		\$ 9,700	\$15,900			
*NORTHERN TRAIL ROAD	\$ 26,000				\$ 11,700	
*MONORAIL MAINTENANCE AREA	\$ 2,500				\$ 4,900	
*EMPLOYEE PARKING LOT	\$ 25,700					
*NORTHERN TRAIL			\$10,700	\$ 18,200	\$ 6,000	
*PATHS TO TROPICS BUILDING	\$ 5,000					
ANNUAL CONSTRUCTION COST	\$154,800	\$202,700	\$129,000	\$133,800	\$166,300	
ENGINEERING DESIGN	\$ 9,000	\$ 12,000	\$ 8,000	\$ 8,000	\$ 10,000	
CONSTRUCTION ADMINISTRATION	\$ 11,000	\$ 14,000	\$ 9,000	\$ 9,000	\$ 12,000	
SUBTOTAL	\$174,800	\$228,700	\$146,000	\$150,800	\$188,300	
CONTINGENCY @ 15%	\$ 26,220	\$ 34,300	\$ 21,900	\$ 22,600	\$ 28,250	
<b>TOTAL PAVED AREAS MAINTENANCE</b>	<b>\$201,000</b>	<b>\$263,000</b>	<b>\$167,900</b>	<b>\$173,400</b>	<b>\$216,550</b>	
<b>PART 3</b>						
<b>MINNESOTA TRAIL EXHIBIT</b>						
GENERAL CONSTRUCTION		\$ 404,000				
MECHANICAL		\$ 66,000				
ELECTRICAL		\$ 12,000				
SITE WORK		\$ 6,000				
ARCH/ENG. DESIGN/CONST. ADMIN.		\$ 48,000				
SUBTOTAL		\$ 536,000				
CONTINGENCY @ 15%		\$ 80,400				
<b>TOTAL MINNESOTA TRAIL EXHIBIT</b>		<b>\$ 616,400</b>				
<b>TOTAL</b>	<b>\$ 644,500</b>	<b>\$ 882,200</b>	<b>\$167,900</b>	<b>\$ 213,000</b>	<b>\$216,500</b>	<b>\$1,450,600</b>
<b>GRAND TOTAL 5-YEAR PLAN 1991-1995</b>		<b>\$2,124,100</b>				
<b>ROOF REPLACEMENT YRS. 2000-2005</b>						<b>\$1,450,600</b>

NOTE: ADD 3% PER YEAR INFLATION FACTOR FOR ALL ITEMS UNDER PARTS 1 & 3, IF IMPLEMENTATION IS DELAYED BEYOND YEAR INDICATED. AN INFLATION FACTOR INCLUDED FOR ITEMS UNDER PART 2, PAVING.

DEPARTMENT: MINNESOTA ZOOLOGICAL GARDEN  
Operations

TO : Dick Buske

DATE: December 18, 1989

FROM : Jan Huve

PHONE: 431-9312

SUBJECT : R. R. B. Budget - FY90

ITEM	QTR	1990 BUDGET	OUTSTANDING	ACT. EXPEND. SALARIES	ACT. EXPEND. SUPPLIES	BALANCE
1. Animal handling equipment	1	\$2,000.00				\$2,000.
2. Completion of walk-in cooler	1	\$1,100.00			\$1,190.00	(\$90.
3. Heart Monitor	1	\$5,000.00				\$5,000.
4. Tapir Holding	1	\$29,000.00	\$5,585.95		\$26,026.28	(\$2,612.
5. Restoration of theater	1	\$25,000.00	\$819.65		\$24,686.89	(\$506.
6. Safety equipment	1	\$2,500.00	\$1,441.14			\$1,058.
7. Engineering	1	\$9,800.00				\$9,800.
8. Vehicle Maintenance	1-4	\$40,000.00	\$4,248.44		\$17,222.22	\$18,529.
9. Electrical Maintenance	1-4	\$30,000.00	\$3,625.69		\$2,913.83	\$23,460.
10. Storage Building	1-4	\$5,000.00	\$1,148.00		\$864.50	\$2,987.
11. Glass Replacement	1-4	\$6,000.00	\$2,823.11		\$595.25	\$2,581.
112. Refrigeration/Sever Maintenance	1-4	\$5,000.00			\$1,789.31	\$3,210.
113. Engineering Maintenance	1-4	\$45,000.00	\$4,854.50		\$15,282.32	\$24,863.
114. Master plan/plant replacement	1-4	\$50,000.00	\$43,254.63		\$1,742.76	\$5,002.
115. Pest Control	1-4	\$40,000.00	\$22,250.00		\$14,304.00	\$3,446.
116. Repair truck hoist	2	\$3,000.00				\$3,000.
117. Lift system for trucks	2	\$1,000.00				\$1,000.
118. Vehicles	2	\$50,000.00	\$26,103.98		\$15,372.00	\$8,524.
119. AV Equipment	2	\$9,700.00	\$8,997.28			\$702.
120. Prairie Pothole Exhibit - Predator control	2	\$5,000.00			\$921.92	\$4,078.
121. Deer Control Fence	2	\$10,000.00	\$11,695.00		\$1,200.00	(\$2,895.
122. Building Services equip/repairs	2	\$10,500.00	\$10,129.04		\$446.76	(\$75.
123. Equipment for plbg shop	2	\$1,500.00	\$291.86		\$1,087.42	\$120.
124. Forest floor exhibit - Rainforest	2	\$5,000.00			\$879.20	\$4,120.
125. Engine/clutch assy for cement buggy	2	\$2,000.00				\$2,000.
126. Tiger moat work rock modifications	2-3	\$6,000.00	\$1,200.00	\$2,252.89	\$1,328.29	\$1,218.
127. Tiger barn wall repair	2-3	\$3,000.00				\$3,000.
128. Mercury light replacement	2-3	\$51,400.00	\$51,400.00			\$0.
129. Footholds - Tahr	2-3	\$2,000.00		\$1,600.23		\$399.
130. Non-skid material for public areas	3	\$2,000.00				\$2,000.
131. Beaver Pond	3	\$3,000.00				\$3,000.
132. Black top repair	3-4	\$20,000.00				\$20,000.
133. Zoo Security	3-4	\$50,000.00				\$50,000.
134. Lower Plaza Repair	3-4	\$10,000.00				\$10,000.
135. USDA	3-4	\$10,000.00	\$585.63		\$650.12	\$8,764.
136. Front Entrance	4	\$37,000.00	\$15,390.00		\$23,655.08	(\$2,045.
137. Bahlen Corn Crib	4	\$5,500.00	\$2,520.00		\$140.11	\$2,839.
TOTAL		\$593,000.00	\$218,363.90	\$3,853.12	\$152,298.26	\$218,484.

Balanced to SWA report - 12-01-89

\$156,151.38

*K. L. ...*

DEPARTMENT: MINNESOTA ZOOLOGICAL GARDEN  
Operations

TO : Dick Buske

DATE: May 2, 1989

FROM : Jan Huve

PHONE: 431-9312

SUBJECT : R.R.B. Budget - FY89

ITEM	AUTH	QTR	BUDGET	OUTSTANDING	ACT. EXPEND.		BALANCE
					SALARIES	SUPPLIES	
11 Building 'A' Improvements	11-21		\$8,000.00	\$1,576.00		\$8,918.14	(\$2,494.14)
12 Engineering Maintenance	11-41		\$45,000.00	\$10,420.36		\$27,596.88	\$6,982.76
13 Discovery Trail Improvements	11-41		\$25,000.00	\$6,357.26		\$13,691.38	\$4,951.36
14 Vehicle Maintenance	11-41		\$35,000.00	\$5,943.40		\$25,406.11	\$3,650.49
15 Refrigeration/Sever Maintenance	11-41		\$5,000.00	\$218.80		\$1,733.90	\$3,047.30
16 VEHICLE REPLACEMENT	11-41		\$7,692.00			\$7,692.00	\$0.00
17 Emergency Repairs - Zoo Houses	11-41		\$2,000.00	\$1,207.50		\$359.41	\$433.09
18 Glass Replacement	11-41		\$5,000.00			\$1,143.95	\$3,856.05
19 SEAL ALL AGGREGATE FLOORS	11-41		\$340.64			\$340.64	\$0.00
110 Roof Repairs	11-41		\$1,036.45			\$15,116.05	(\$14,079.60)
111 BLACKTOP REPAIRS	11-41		\$13,209.62	\$1,100.00		\$13,259.68	(\$1,150.06)
112 Replacement tires	11-41		\$4,500.00			\$4,535.68	(\$35.68)
113 Bio Programs Uniforms	11-41		\$3,000.00	\$1,221.00		\$4,233.63	(\$2,454.63)
114 Bio Programs Equipment Replacement	11-41		\$7,250.00	\$2,113.81		\$5,300.74	(\$164.58)
115 Electric Maintenance	11-41		\$52,000.00	\$23,359.46		\$96.59	\$28,543.95
116 USDA VIOLATIONS	11-41		\$19,000.00	\$12,250.95	\$156.09	\$5,970.61	\$622.35
117 Plant Replacement/Master Planning	11-41		\$25,000.00	\$14,292.27		\$4,739.15	\$5,968.58
118 OPERATIONS MISCELLANEOUS	11-41		\$5,357.29	\$369.45		\$4,585.04	\$402.80
119 Loading Dock Double Doors - Tropics	12-31		\$1,298.66			\$1,298.66	\$0.00
20 LAH Hot Water	12-31		\$1,000.00				\$1,000.00
21 Sloth Bear Holding	12-31		\$25,000.00	\$10,989.08	\$586.56	\$10,900.06	\$2,524.36
22 Hot water sterilizer	12-31		\$1,200.00			\$109.68	\$1,090.32
223 GRAPHIC IMPROVEMENTS	12-31		\$1,465.18	\$475.00		\$990.18	\$0.00
24 Prairie Bird Exhibit	13-41						\$0.00
25 Hay Feeders	1		\$3,900.00			\$3,016.32	\$883.68
26 LIBRARY WINDOW TREATMENT	1		\$525.00			\$525.00	\$0.00
27 Battery Charger	2		\$650.00			\$426.35	\$223.65
28 NT Staff Area/Tiger Hldg Safety Improvements	2		\$13,450.00	\$11,106.68		\$654.23	\$1,689.09
29 Non-slip surfaces on smooth concrete	2		\$1,500.00	\$1,196.16			\$303.84
130 BEAVER POND FILTRATION	2		\$0.00				\$0.00
131 Bison Squeeze/Loading Chute	2		\$11,000.00	\$10,100.00			\$900.00
132 WINDOW DEFROSTING - MN EXTERIOR	2		\$3,000.00			\$3,138.66	(\$138.66)
133 Trash Cart	2		\$500.00	\$524.99			(\$24.99)
134 MT Bat Exhibit (Door and Lights)	2		\$1,000.00	\$459.00		\$594.38	(\$53.38)
135 TILE DG RESTROOM	2		\$0.00				\$0.00
136 COMPUTERIZED PREVENTIVE MAINT PROGRAM	2		\$0.00				\$0.00
137 Skidsteer Loader/Car	2		\$12,000.00			\$11,660.00	\$340.00
138 Main Aviary Door	2						\$0.00
139 COMPOST GARBAGE CONTAINERS	3		\$0.00				\$0.00
140 Replacement Push Lawn Mowers/Weedwhips	3		\$1,500.00				\$1,500.00
141 Toro 52	3		\$1,900.00	\$4,495.99			(\$2,595.99)
142 Main Aviary Sink/Main	3		\$1,200.00			\$260.87	\$939.13
143 Walk-in Cooler (Main Kitchen)	3		\$8,000.00	\$10,458.18			(\$2,458.18)
144 NEW TRASH CANS	3		\$0.00				\$0.00
145 LOWER PLAZA REPAIR	4		\$2,258.14	\$725.00		\$3,118.92	(\$1,585.78)
146 TROPICS BUILDING HUMIDIFIER	4		\$0.00				\$0.00
147 MINNESOTA AND NT IRRIGATION	4		\$0.00				\$0.00
148 Storeroom Reimbursement						\$1,125.39	(\$1,125.39)
149 Light Replacement			\$65,000.00	\$77,150.00		\$2,720.00	(\$14,870.00)
150 Pest Control			\$22,202.13	\$22,046.52		\$10,719.80	(\$10,564.17)
151 Prairie Dog Exhibit			\$25,064.89				\$25,064.89
152 Dolphin Pool Painting				\$41,500.00			(\$41,500.00)
153 Bleachers				\$12,294.00			(\$12,294.00)
			\$468,000.00	\$283,950.86	\$742.65	\$195,978.08	(\$12,671.51)
					\$196,720.73		

Balanced to SWA - 04-01-89

DEPARTMENT: MINNESOTA ZOOLOGICAL GARDEN  
Operations

TO : Dick Buske

DATE: June 9, 1988

FROM : Jan Huve

PHONE: 431-9312

SUBJECT : R.R.B. Budget - FY88

ITEM	AUTH	QTR	BUDGET	OUTSTANDING	ACT. EXPEND. SALARIES	ACT. EXPEND. SUPPLIES	BALANCE
						\$365.17	\$384.83
11 Flammable Liquid Storage Cabinet	INR	11	\$750.00				\$7,000.00
12 Raw material storage bins - compost pad	IDD	11	\$7,000.00	Cancel			\$2,000.00
13 Storage room for paint	IDD	11	\$2,000.00	Cancel			
14 Repair/replace B Bldg warehouse rear door	ISB	11	\$1,500.00			\$2,053.22	(\$553.22)
15 Repair fire alarm system	IDD	11	\$10,000.00			\$6,224.56	\$3,775.44
16 Roof and Gutters - Storage bldg	ISB	11	\$2,000.00	\$2,000.00			\$0.00
17 Northern Trail Graphics	INR	11	\$750.00			\$712.25	\$37.75
18 Hay carts	IKG	11	\$450.00			\$476.58	(\$26.58)
19 Garbage cart	IJP	11	\$500.00			\$138.75	\$4.00
110 Reception area -curator	INR	11	\$800.00			\$588.00	\$212.00
111 Extra radios - Ed, NR, DD, JP, RT, DC		11	\$7,000.00	\$453.47		\$6,585.36	(\$38.83)
112 Two-wheel dollie	ISB	11	\$550.00			\$562.14	(\$12.14)
113 Water analysis equipment	IMD	11	\$500.00	\$367.29		\$280.54	(\$147.83)
114 Replace filter media in salt towers	IDD	14	\$4,000.00				\$4,000.00
115 "A" Building Office renovation	IRT	12	\$6,000.00				\$6,000.00
116 Replace carpeting - Aquarium public viewing	IMD	12	\$2,000.00			\$3,545.91	(\$1,545.91)
117 Otter Holding	IDD	12	\$5,000.00		\$3,788.76	\$747.86	\$463.38
118 Two 4-wheel drive	IDD	12	\$10,000.00	\$1,436.80		\$6,600.00	\$1,963.20
119 Beaver tree peninsula	IMD	12	\$1,000.00		\$963.32	\$315.60	(\$278.92)
120 Security gate - Bison/Elk	INR	12	\$1,200.00				\$1,200.00
121 Factory condition scrubbers/sweepers	IDD	12	\$2,000.00			\$1,693.40	\$306.60
122 Tahr Holding	IKL	12	\$2,000.00			\$534.49	\$1,465.51
123 Operating hardware - owl	IJP	12	\$2,500.00	\$1,546.81			\$953.19
124 Cash registers	ILM	12	\$25,000.00			\$25,000.00	\$0.00
125 Replace carpeting - Zoolab	ISH	12	\$5,000.00			\$4,709.91	\$290.09
126 Sliding door blinds - Education	ISG	12	\$500.00			\$198.00	\$302.00
127 Window defrosting - MN	IJB	14	\$7,500.00	\$441.28		\$389.98	\$6,668.74
128 Reglaze windows	IKM	12	\$3,000.00			\$1,793.79	\$1,206.21
129 Angle broom for Bobcat	IDD	12	\$4,400.00			\$2,491.00	\$1,909.00
130 Hay Barn deck	INR	12	\$1,000.00			\$1,238.53	(\$238.53)
131 Replace gasket on freezer door	ISB	12	\$400.00			\$325.39	\$74.61
132 Manure carts	IKG	12	\$800.00			\$700.00	\$100.00
133 Grey fox stream	IMD	12	\$1,000.00		\$890.41	\$380.11	(\$270.52)
134 Quanta, rare earth screen x-ray cassettes	IFW	12	\$1,250.00	\$1,134.46			\$115.54
135 Restroom Renovation - IDG	IDD	13	\$2,000.00				\$2,000.00
136 Replace Cation exchangers	IRS	13	\$2,500.00			\$1,981.81	\$518.19
137 Bat Exhibit/Holding light fixtures	IMD	13	\$500.00				\$500.00
138 Public restrooms - Upper whale	IDD	13	\$5,000.00	\$604.00		\$2,084.53	\$2,311.47
139 Ceiling fans - Zoolab	ISH	13	\$600.00	\$128.79			\$471.21
140 Greenhouse fogging system	IRS	13	\$3,000.00	\$7,244.57			(\$4,244.57)
141 Overhead fans - Education	IDD	13	\$500.00			\$202.16	\$297.84
142 Marine Mammal Tank	IDD	13	\$6,750.00				\$6,750.00
143 Replace C Gem	IDD	13	\$16,300.00	\$10,475.00		\$6,476.00	(\$651.00)
144 Repaint/restain wood surfaces - MN Trail	IMD	14	\$500.00			\$524.22	(\$24.22)
145 Iso Barn renovation	INR	14	\$20,000.00				\$20,000.00
146 Alum fibrated coating - LAH roof	IDD	14	\$1,500.00	\$610.56			\$889.44
147 Rattlesnake renovation	IJP	14	\$5,000.00	\$1,941.75	\$860.52	\$736.59	\$1,461.14
148 Childrens Zoo Renovation	IKG	1A11	\$37,000.00	\$20,750.38		\$19,155.86	(\$2,906.24)
149 Engineering	IDD	1A11	\$45,000.00	\$4,556.16		\$38,469.19	\$1,974.65
150 Plant Replacement	IRT	1A11	\$25,000.00	\$19,611.95		\$2,985.22	\$2,402.80
151 Tropics Renovation	IKL	1A11	\$10,000.00			\$15,000.77	(\$5,000.77)
152 Electrical Maintenance	IDD	1A11	\$7,500.00	\$296.49		\$6,632.75	\$570.76
153 Vehicle Maintenance	IDD	1A11	\$25,000.00	\$2,094.61		\$23,681.61	(\$776.20)
154 Emergency repairs - Zoo houses	IRT/DD	1A11	\$2,000.00	\$1,153.93		\$370.63	\$475.44
155 Refrigeration/Sewer Maintenance	IDD	1A11	\$5,000.00			\$2,850.90	\$2,149.10
156 Glass Replacement	IDD	1A11	\$5,000.00	\$9,595.96		\$1,628.83	(\$6,224.77)
157 MN Lake Exhibit	IMD	11-21	\$25,000.00	\$3,949.07	\$6,029.43	\$20,312.08	(\$5,290.55)
158 Blacktop repair/overlay	IDD	11-41	\$10,000.00	\$8,700.00		\$9,250.40	(\$7,950.40)
159 Roof repairs - Educational wing	IDD	11-41	\$80,000.00	\$91,478.58		\$31,390.96	(\$42,869.58)
160 Plaza restoration work	IDD	12-41	\$10,000.00	\$24,677.34		\$820.00	(\$15,497.34)
161 Bio Programs	IRT	1A11	\$10,000.00	\$5,433.07		\$9,589.69	(\$5,022.77)
162 Miscellaneous						\$3,885.77	
163 MN Sunscreen						\$3,976.00	
			\$480,000.00	\$220,682.32	\$12,532.44	\$270,656.51	(\$23,871.22)
					\$283,188.95		

Balanced to SWA - 04-30-88

DEPARTMENT: MINNESOTA ZOOLOGICAL GARDEN  
Operations

TO : Dick Buske

DATE : September 24, 1986

FROM : Jan Huve

PHONE: Ext 303

SUBJECT : R.R.B. Budget - FY87

ITEM		AUTH.	BUDGET	OUTSTANDING	ACT. EXPEND. SALARIES	ACT. EXPEND. SUPPLIES	BALANCE
11 Engineering	All	RB	\$44,900	\$14,170		\$3,368	\$27,362
12 Electrical	All	RB	\$15,000	\$5,152		\$839	\$9,008
13 Glass Replacement	All	RB	\$5,000				\$5,000
14 Zoo Residential Maintenance	All	RB	\$2,000				\$2,000
15 USDA	All	RT	\$20,000	\$2,496		\$5,055	\$12,450
16 Sunscreen for MN public walkway	All	RT	\$10,000		\$390		\$9,610
17 Roof Repairs	All	RB	\$98,850	\$390			\$98,460
18 General repair - vehicles	All	RB	\$30,000	\$7,023			\$19,984
19 Red Panda Exhibit	1st-2nd	RT	\$4,000				\$4,000
10 General Exhibit Repair	1st	RT	\$20,000		\$6,866	\$111	\$13,023
11 Scales	1st	RT	\$7,500				\$7,500
12 Sunscreen to cover whale pool	1st	RT	\$1,000				\$1,000
13 Install hoist	1st	RB	\$2,000				\$2,000
14 Clean salt tower	1st	RB	\$4,000				\$4,000
15 Puma mesh	1st	RB	\$14,000				\$14,000
16 Well - picnic grounds	1st	RB	\$4,000				\$4,000
17 Graphics materials	1st	RB	\$8,000	\$3,885		\$3,500	\$615
18 Xerox machine	1st	RB	\$9,600	\$7,879			\$1,721
19 Refrigeration Maintenance	1st	RB	\$4,000	\$548		\$426	\$3,026
120 MN exhibit renovation	2nd-3rd	RT	\$25,000				\$25,000
121 Telephone/radio receiver	2nd	RB	\$2,000				\$2,000
122 Concrete Slab Repair	2nd	RB	\$7,000				\$7,000
123 Caulking of public walkways and plazas	2nd	RB	\$9,500				\$9,500
124 Sealing of public walkways and plazas	2nd	RB	\$3,000				\$3,000
125 Flying fox exhibit renovation	2nd	RT	\$20,000				\$20,000
126 Ladder for salt-water mixing tanks	2nd	RT	\$500				\$500
127 Renovate area under h/c bridge	2nd	RT	\$8,000				\$8,000
128 Rpr broken floor slab in tiger	2nd	RB/RT	\$6,000				\$6,000
129 Hoist	2nd	RB	\$5,000			\$202	\$4,798
130 Blacktop overlay, rplcwt	2nd	RB	\$10,000				\$10,000
131 Wall for Salt Tower + exhaust	3rd	RB	\$3,000				\$3,000
132 Incubator room repairs	3rd	RT	\$200				\$200
133 Brooder room repairs	3rd	RT	\$200				\$200
134 Mixed Herp modifications	3rd	RT	\$250				\$250
135 Htg systes for Asian fish exhibit	3rd	RT	\$1,000				\$1,000
136 River otter hldg modifications	3rd	RT	\$5,000				\$5,000
137 Window defroster - study	3rd	RT	\$2,500				\$2,500
138 Tree removal and restoration	3rd	RT	\$5,000				\$5,000
139 Lower Duck Pond	4th	RT	\$7,000				\$7,000
140 Renovate tree peninsula - beaver	4th	RT	\$1,000				\$1,000
141 Hill stabilization of H/C exhibit	4th	RT	\$3,000				\$3,000
142 Bison hldg modification/squeeze chute	4th	RT	\$5,000				\$5,000
143 Shrub replacement	4th	RB	\$5,000				\$5,000
144 4-wheel drive - Engineering	4th	RB	\$12,000			\$8,929	\$3,071
145 4-wheel drive plov truck	4th	RB	\$13,000	\$3,000			\$10,000
146 Whale Tank Leak/Undervater Viewing	4th	RB	\$5,000				\$5,000
			\$468,000	\$44,542	\$7,256	\$25,423	\$390,776

Balanced to SWA 08/31/86

DEPARTMENT: MINNESOTA ZOOLOGICAL GARDEN  
Operations

TO : Jim Rognlie

DATE : August 23, 1986

FROM : Dick Buske

PHONE: Ext 303

SUBJECT : R.R.B. Budget - FY86

ITEM	AUTH.	BUDGET	ACT. EXPEND. SUPPLIES	ACT. EXPEND. SALARIES	OUTSTANDING	BALANCE
1 Engineering	GR	\$41,962	\$38,438		\$1,267	\$2,257
Circulating Pumps 8900						
Converters 5400						
Motors and controls 7500						
Submersible pumps 13150						
Air Conditioning 10012						
2 Phase II - Horse/Camel	GB	\$12,939	\$11,504	\$1,435		(\$0)
3 Electrical	GB	\$10,100	\$10,566	\$203	\$601	(\$1,271)
Light timers 1000						
Tropic bldg roof lights 9100						
4 Vehicle repair	BR	\$23,035	\$24,217		\$114	(\$1,296)
5 Bobcat	BR	\$26,530	\$26,530			\$0
6 Air temp control - MN trail, aquar	JL	\$500				\$500
7 Epoxy walls, floors, concrete	GB		TNSF 8			\$0
8 General Exhibit Repair	GB	\$38,000	\$17,929	\$12,101	\$9	\$7,961
USDA - 8918						
Caulking - 1500						
Whale/dolphin - 8082						
Winterization - 2500						
MN Mesh - 7000						
Painting - 10000						
9 Horse/Camel Renno	GB	\$7,277	\$7,492			(\$215)
10 Tropics aviary	GB		TNSF 17			\$0
11 Porcupine/fisher stream	GB	\$2,000				\$2,000
12 Recaulk holding area	GB		TNSF 8			\$0
13 Dense foam padding - animal hlth	JL		TNSF 1			\$0
14 MN exhibit mesh roofs	GB		TNSF 8			\$0
15 Tropics aviary netting	GB	\$8,000	\$8,522			(\$522)
*16 Non-glare screening - MN	GB	\$8,000				\$8,000
17 Scuba Gear	GB	\$1,300	\$1,172			\$128
18 Supplies to replace signage	AS	\$4,250	\$460		\$360	\$3,430
19 House Repairs	GB	\$5,421	\$5,401			\$20
20 Pest Control	RB	\$2,000	\$115		\$543	\$1,343
*21 Seal incubator room-humidity control	JL	\$2,000			\$700	\$2,000
22 Whale-Dolphin gates	JL	\$3,000	\$835			\$1,465
*23 Oak & elm disease	BR	\$1,949	\$1,949			(\$0)
24 Seal interior walkways	GB	\$2,500	\$2,042			\$458
25 Clean clerestory	BR	\$200	\$200			\$0
26 Winterize CZ barns	GB		TNSF 8			\$0
27 Scales for weighting animals	JL	\$3,000	\$143			\$2,857
28 Surgical instruments	JL	\$1,500	\$734		\$326	\$440
29 Animal sleeping board	JL	\$1,000	\$1,000			\$0
30 Carpet "A" offices	JL		TNSF 1			\$0
31 Two-way radios	BR	\$4,455	\$4,455			(\$0)
32 Cash registers	DB	\$20,000				\$20,000
33 Salaries	GB	\$32,000	\$7,150	\$23,913	\$942	(\$5)
34 Uncommitted a. Task Force	DB					\$0
b. Miscellaneous		\$9,484	\$12,148		\$14,641	(\$17,305)
*35 Cushman dumptruck	BR	\$10,000				\$10,000
*36 Animal Van	BR	\$16,000				\$16,000
*37 Maintenance Vehicles	BR	\$10,000				\$10,000
*38 100 gal marine hldg tank	JL	\$3,000				\$3,000
*39 Roof leaks - MN aviary/aquaria	GB	\$7,000				\$7,000
*40 4 Chillers - Tropics	JL	\$4,000				\$4,000
*41 Carpet - whale viewing	GB	\$5,000	\$1,357		\$6,584	(\$2,942)
*42 AV Equipment	DB	\$36,698				\$36,698
Color Video Camera 730AP 14888						
Digital Time Base Corr 7950						
Chyron VP-2 Char Gen 8371						
Sony VO-5850 VC Recor/Play 5489						
*43 Camouflage red panda nest bx	GB	\$1,500				\$1,500
*44 Redesign/modify tahr hldg	GB	\$4,000				\$4,000
*45 Sliding gates	GB	\$1,500				\$1,500
*46 Bison squeeze chute	GB	\$2,500				\$2,500
*47 Large tree - puma	GB	\$4,000				\$4,000
*48 Animal loading chutes/bison	GB	\$7,000				\$7,000
*49 Raise walls-elk/bison	GB	\$4,000				\$4,000
*50 Isolate tiger holding HVAC	GB	\$10,000				\$10,000
*51 Skylight housing	GB	\$500				\$500
*52 Stain exterior wood structures	GB	\$1,000				\$1,000
*53 Lodge tables/150 chairs	DB	\$3,900				\$3,900
*54 Animal food refrigerators	JL	\$7,000				\$7,000
*55 Gas sterilization unit	JL	\$200				\$200
*56 Laparoscopy - animal health	JL	\$3,000				\$3,000
*57 Recore zoo key system	GB	\$18,000			\$481	\$17,519
Telephone			\$2			
		\$432,200	\$184,363	\$37,653	\$26,569	\$183,617

Balanced to SWA 07/31/86

\* 4th quarter funds

1. Original budget - \$507,200 (\$15,000 transferred to Board's task force study on Zoo's future

and remaining \$60,000 for other

2. Uncommitted - \$2666 (Parking Lot

ing); \$1,944 - (video equipment repair); \$925.00 (Striping ring road, CZ lot)

## EXHIBITS AND RENOVATIONS

### Rationale

In its first ten years of operation the Minnesota Zoo has established an average annual attendance base of approximately 850,000 people. However for the Zoo to continue to maintain that base and--more importantly--to grow, it is critical that we put in place programs and activities that will bring visitors back to the Zoo for repeat visits and new visitors for a first visit. To accomplish this we are undertaking the following five projects:

### Projects

1. DOLPHINARIUM - a conversion of the outdoor dolphin pool to an enclosed dolphinarium with seating for 900 people. The exhibit would include six to eight dolphins performing in training demonstrations daily.
2. TROPICAL CORAL REEF - a conversion of the indoor dolphin pool to a mixed exhibit of sharks and coral reef fish. The exhibit would be the first of its kind in the country allowing both sharks and fish to share the same area.
3. ARCTIC EXHIBITS - a new exhibit complex that would include indoor and outdoor exhibits for animals such as belugas, polar bears, seals, sea lions, and walrus.
4. AMPHITHEATRE - a 1,500 seat amphitheatre to be located on the Northern Trail that will be the home of the WORLD OF BIRDS SHOW, concerts, and other performances.
5. RENOVATIONS - a major re-design of the Zoo's Main Building that will make the entrance areas more hospitable and informative for Zoo visitors. Plans call for the expansion of the popular ZOOLAB, a play area for children, improved and expanded information graphics, and major changes in the acoustics and lighting.

### What the Exhibits Will Do for the Zoo

1. Demonstrate our responsiveness to legislative, visitor, and public requests for new and exciting exhibits at the Zoo. The Zoo is like any other public facility; change and growth are important to our constituents. The appeal of a static institution is limited and will diminish as time goes on. By responding to requests for new exhibits we are investing in the sustained growth and health of the future of this Minnesota cultural institution.
2. Present a richer more diverse and exciting array of exhibits to be enjoyed by Zoo visitors. When the Zoo was originally planned, designers envisioned a facility that would eventually present habitats from throughout the world. The planned new exhibits move the Zoo closer towards that goal by expanding the scope of the Zoo into new environments, new species, and new experiences.
3. Strengthen the Zoo's position as a leading educational resource for Minnesota students. Conservation, wildlife, the environment, and other scientific issues are critical in the education of young Minnesotans. The Minnesota Zoo is currently used annually by 75,000 students to supplement their science curriculum. Through the new exhibit programs the range of studies will be expanded and will benefit teachers and students in the State.
4. Promote the growth of our attendance base. Experience at other zoos has shown that the opening of a major new exhibit brings a 15-20% attendance burst in the first year it is open. However the increase is not totally sustained in succeeding years. A net growth of 5% annually can be sustained with appropriate marketing and public relations activities. By committing to a program of a number of new exhibit openings, the Zoo can begin to move the base level of attendance up on a long term basis.

# MINNESOTA ZOO CONTRIBUTORS

In only two years of aggressive fundraising, the Minnesota Zoo has grown from annual cash contributions of \$80,000 up to \$392,000.

One of the major contributors to this growth is the A.D.O.P.T. program. Last year, 2,242 individuals adopted their favorite zoo animals and raised more than \$78,000 for the animals and the Zoo—a 53 percent increase from the last year!

Another major growth contributor is the new corporate exhibit sponsorship program, a partnership opportunity for corporations wishing to sponsor a permanent wildlife exhibit. Thirteen Minnesota corporations are currently participating in the program.

This also was the first year of the Wishing Well, which collected \$26,740 from Zoo visitors at three locations around the Zoo.

**Up to \$100**

John P. and Barbara L. Armour  
 Andrea Bell Autenrieth  
 James and Betsy Begalke  
 Jeffrey L. and Debra L. Clark  
 Creek Valley Elementary P.T.A.  
 Elizabeth Drake  
 George A. and Mary W. Dramdahl  
 Earl and Marian Drussell  
 Elsie Ewert Memorial  
 Gerald and Selma Giving  
 Mrs. E.M. Groth  
 Kenneth Hoover  
 Norris D. Jackson  
 Virginia T. Kakac  
 Nancy L. Langness  
 Joseph E. and Arline Lee  
 Marjorie M. Lychik  
 Paul Ludlow  
 Stuart MacPhail  
 Mrs. Willard Mapes Memorial  
 McCaw RCC Communications  
 The McVay Foundation  
 Minnesota Valley Veterinary  
 Medical Association  
 Helen C. Mjolsnes  
 Candace Muir  
 Rosemary D. and Harvey D. Ogren  
 Orono Independent School  
 District 278  
 Thomas Peyton  
 Richfield Bank & Trust Co.  
 Philip Richman  
 Frances Elizabeth Schaar  
 Michael C. Shannon  
 Mrs. A. Godfrey Siverson  
 Mildred A. Smith  
 Dr. Michael J. and Jane D. Spencer  
 Barbara J. Stevens  
 Janet M. Unga  
 M. Jeanne Weigum  
 K.S. and R.C. Wenaas  
 Michael J. Zwolski

**\$100-499**

Mr. and Mrs. Ronald Anderson  
 Mrs. Charles Beery  
 Bradley Cayen Boardman Memorial  
 Roy Boldt Memorial  
 Composit, Inc.  
 Dodd B. and Ann A. Cosgrove

Violet A. Crawford Memorial  
 Ella P. Crosby  
 Daffi Oils Garden Club  
 Financial Publishers  
 G & K Services, Inc.  
 Arnold and Sylvia Goldman  
 Mr. and Mrs. Bernard M. Granum  
 Frank Hirschfield  
 Douglas C. and Sharon R. Hubbard  
 John F. Kennedy University  
 Shirley D. Johnston, DVM  
 Kenneth S. MacKenzie  
 Metropolitan State University  
 NHK  
 (Japan Broadcasting Company)  
 Northwest Teleproductions  
 Josie and Edward Phelps  
 Mary F. and Douglas R. Platt  
 Lyndsay Jean Ricker Memorial  
 The Ritz Foundation  
 Dr. Sallie P. Sheldon  
 William H. Spell  
 The Charles B. Sweatt Foundation  
 The Norman H. Tallakson Trust  
 Mrs. E. Palmer Tang  
 Warner Properties  
 Wilson Learning Corporation  
 Zonta Club of Minneapolis

**\$500-999**

AFSCME Local #1929  
 Barry Bonoff  
 Mark and Marcia Cherniack  
 Marsh & McLennan, Inc.  
 Jennifer Meyer Memorial  
 Pentair, Inc.  
 The Quaker Hill Foundation  
 Remmele Engineering, Inc.  
 Willis F. Rich  
 St. Paul Center/BCE Development  
 Jeffrey E. Stieller  
 The Whitney Foundation  
 Paul E. Zollman

**\$1,000-4,999**

The Elmer L. and  
 Eleanor J. Andersen Foundation  
 The Katherine B. Andersen Fund  
 Bachman's, Inc.  
 Black's Photography  
 Joseph and Ruth Buchan

Burton D. and Rusty Cohen  
 The Julia Thorpe Cote Trust  
 Ellie and Tom Crosby  
 GE Capital Fleet Services, Inc.  
 Genmar Industries, Inc.  
 Mary Livingston Griggs and  
 Mary Griggs Burke Foundation  
 International Dairy Queen  
 Investment Advisers, Inc.  
 Jif Peanut Butter  
 Kimberly-Clark Corporation  
 Suzanne and Kip Knelman  
 Gregg Edwin Larson Memorial  
 Kenneth W. Lindberg  
 Donna Marie and Richard Luther  
 MCA Home Video.  
 Sight & Sound Distributors  
 The Marbrook Foundation  
 Minnesota Mutual Life  
 Insurance Co.  
 Minnesota Zoological Society  
 The Nash Foundation  
 Park East Tours  
 The Pillsbury Company  
 The Margaret Rivers Fund  
 The Saint Croix Foundation  
 Sears, Roebuck and Company  
 The Smith Foundation  
 Unisys  
 The Valspar Corporation  
 Elizabeth M. Winston

**\$5,000-9,999**

3M  
 Nancy Azzam  
 Deloitte Haskins & Sells  
 IBM  
 Charlotte W. Jones  
 MPLS. ST. PAUL Magazine  
 Mona Meyer & McGrath  
 Rosemount, Inc.

**\$10,000 +**

American Express  
 The F.R. Bigelow Foundation  
 Carson Pirie Scott  
 The Chadwick Foundation  
 Mr. and Mrs. Edward N. Dayton  
 Koch Industries, Inc.

**Matching Gifts**

The Cray Research Foundation  
 Eaton Corporation  
 Emerson Electric Company  
 The First Bank System Foundation  
 IBM  
 IDS Financial Services, Inc.  
 The NCR Foundation  
 The Saint Paul Companies  
 US West

**In-Kind Contributions**

Ask Mr. Foster  
 Bachman's  
 Black's Photography  
 Blue Cross/Blue Shield  
 Bolger Publications  
 Carson Pirie Scott  
 Colle & McVoy Inc.  
 Daytons  
 Delta Air Lines  
 Frito Lay  
 Fuji  
 Garden & Associates  
 General Foods  
 Gladstone House  
 IBM  
 International Dairy Queen  
 K102-FM Country  
 KLXX  
 KTCZ  
 Andrew Klimek  
 Kodak  
 Litho Specialties  
 Little Caesars Pizza  
 MLT Vacations  
 David Mech  
 Messerli and Kramer  
 MPLS. ST. PAUL Magazine  
 Naegle Outdoor Advertising  
 Northwest Airlines  
 Princess Tours  
 Proctor & Gamble  
 R-W/Midwest Vending, Inc.  
 Richard Hamilton Smith  
 Royal Caribbean Cruise Line  
 San Diego Wild Animal Park  
 San Diego Zoo  
 SeaWorld of San Diego  
 Super America  
 WCCO-TV  
 WLOL  
 WLTE

SEE ALSO ANNUAL REPORT FY1989 INCLUDED IN TAB 57. OTHER.

## Meeting the Challenge—Donors

### Annual Contributions

In 1988 the Minnesota Zoo launched a special fund raising effort to meet the challenge of raising \$500,000 in two years matching a challenge appropriation from the Minnesota Legislature. A total of \$250,000 in cash and pledges was raised in the first year of the program.

### Up to \$100

Carol S. Allin  
American Association of Retired Persons, Inc.  
American Mobile Homes, Inc.  
Anonymous  
Gene Becker and Sons, Builders  
James and Betsy Begalke  
Stuart and Diane Bonniwell  
Charity Brand  
Richard J. and Joan Chalmers  
Roger M. Dahlberg  
Dodd Civic Club  
Dodge Center Elementary  
Elizabeth Drake  
Harriet C. Dunlap  
Eastman Kodak Company  
Mrs. C. K. Evans  
Scott V. Feder  
W. G. Flint  
Roy J. Gavin  
Robert E. and Nancy Granrud  
E. M. Groth  
Josephine Horsley  
Shirley D. Johnston, DVM  
Jacqueline N. Jones  
Marjorie M. Liychik  
Mary Lofness  
Miles F. and Barbara J. Lubrant  
Kenneth S. MacKenzie  
The McVay Foundation  
H. R. Miller Electric, Inc.  
Miss Teen of America Pageant  
Helen Moelter  
Therese M. Morzinski  
Mrs. David Ottermess  
Patricia M. Overmire  
Park Jeep-Eagle, Inc.  
Pentair, Inc.  
Performance Computer Forms  
Jay Morrow Peyton  
Wallace E. Potts  
James R. and Jane R. Rasmussen  
Marvin Robertson Memorial  
Savage Parts Service, Inc.  
Norman Schanfield  
Arthur and Elizabeth Schmidt  
Shirley D. Scritchfield  
Dr. Michael J. and Jane D. Spencer  
C. C. and Mary K. Stout  
Jane Sweet  
Charlotte P. Waldron  
Renee L. Watson  
Michael R. and Joann White

### \$100 - \$499

Al Baker's  
The Henry and Betty Albrecht Foundation  
American Association of Cereal Chemists  
American Medical Systems  
Mr. and Mrs. Ronald Anderson  
Bachman's, Inc.  
Bernco, Inc.  
Bor-Son Construction, Inc.  
The Burdick Family Charitable Foundation  
Cornelius Company

Ella P. and Thomas M. Crosby  
Daffodil Garden Club  
G & K Services, Inc.  
George W. Gardner  
Genz-Ryan Plumbing & Heating Company  
Arnold and Sylvia Goldman  
Mr. and Mrs. Bernard M. Granum  
Stanley B. and Jane Hooper  
Peter A. Jordan, PhD  
Knutson Rubbish Service, Inc.  
Koehnen's Eagan Service Center  
Darwin E. Lay  
Rudy Luther Burnsville  
Volkswagen, Inc.  
National Computer Systems  
Gary E. Nichols, M.D.  
Larry M. O'Shaughnessy  
Pepin, Dayton, Herman & Graham  
Edward and Josie Phelps  
Mary F. Platt  
The Quaker Hill Foundation  
The Rawlings Four-Star Foundation  
The Ritz Foundation  
John E. and Lois A. Rogers  
Mr. and Mrs. W. A. Schott  
The Mendon F. Schutt Foundation  
Shaw-Lundquist and Associates  
Dr. Sallie P. Sheldon  
The Sieff Family Foundation  
Joseph E. Sizer  
Mrs. Lewis S. Small  
Leonard M. Snyder  
William H. Spell  
Dan and Vicki Svedarsky  
The Charles B. Sweatt Foundation  
The Alex G. Tankenoff Foundation  
Warner Properties  
Wilson Learning Corporation  
The Woman's Club of Minneapolis  
World Aerospace Corporation  
Michael J. Zwolski

### \$500 - \$999

Barry Bonoff  
David R. Fesler  
Knox Lumber Company  
Leonard Street and Deinard  
Kenneth W. and Carol Lindberg  
Marsh & McLennan, Inc.  
The Minnesota Title Foundation  
The Red Wing Shoe Company  
Foundation  
Willis F. Rich  
Roche Bobois  
The Smith Foundation  
Lily E. Smith Memorial  
Julia Colman Timm  
The Irene Hixon Whitney Family  
Foundation  
Paul E. Zollman, DVM

### \$1,000 - \$4,999

Nancy C. Azzam  
Beta Sigma Phi  
Betchart Expeditions  
Bradley Cayan Boardman Memorial  
Brock White Company  
Joseph and Ruth Buchan  
The Patrick & Aimee Butler Family  
Foundation  
Mark and Marcia Chemiack  
Rusty and Burt Cohen  
Julia Thorpe Cote Trust  
Courtyard by Marriott  
Ellie and Tom Crosby  
Fingerhut Corporation  
Genmar Industries, Inc.  
William D. Howe

IBM Corporation  
Bertha Johnson  
The Jostens Foundation, Inc.  
Bernadette J. Klein  
I. P. Knelman  
Gregg Edwin Larson Memorial  
Donna Marie and Richard Luther  
Harveydale Maruska  
Malcolm W. McDonald  
The McNeely Foundation  
Minnesota Mutual Life  
The Minnesota Zoological Garden  
Foundation  
The Nash Foundation  
Oakdale Cardiology  
Oppenheimer, Wolff and Donnelly  
Peat Marwick Main & Co.  
The Prudential Insurance Company  
of America  
Hazel H. Reinhardt  
Lyndsay Jean Ricker Memorial  
The Margaret Rivers Fund  
The Saint Croix Foundation  
The Schott Foundation  
The Fred M. Seed Foundation  
Super Valu Stores, Inc.  
Rose Totino  
Touche Ross & Co.  
Unisys  
The Valspar Foundation  
Peter H. Watson  
West Publishing Co.

### \$5,000 and over

American Express  
The Athwin Foundation  
The Chadwick Foundation  
Dayton's  
Mr. and Mrs. Edward N. Dayton  
Donaldsons  
Florence Gladys Hanson  
International Dairy Queen  
Mr. and Mrs. Steven Leuthold  
The Medtronic Foundation  
The RMT Foundation  
Donald Weesner

### Animals Depend on People To

ADOPT is a popular fund raising program at the Minnesota Zoo. 1,780 individuals contributed \$54,180.00 in 1988. Contributions are used to maintain and improve facilities for the care of the animals.

### ADOPT Donors of \$100 or more July 1987 - June 1988

Elizabeth Abbott  
Mary Lou Buckmeier  
Joseph Buchan  
Rovin Rogues Camping Club  
Ruth Cole  
Douglas Coleman  
Earl Cunningham  
Richard Dietz  
Dr. Henry Doerr  
Mary Anna Dyar  
Vernon Edberg  
Chaska Elementary  
Lincoln Elementary  
Phyllis Erickson  
David Fesler  
Ms. D.M. Gabbert  
Lynda Gears  
Bernard Granum  
Merideth Hale  
Mary Lois Hall  
Linda Hansohn  
Helen & Rosanne Harris  
Josephine Horsley  
A.D. Hulings  
Charlotte Jones

Ethel Keller  
Preston King  
Mr. & Mrs. W.G. Kirchner  
David Knudson  
Ruth Koester  
Constance LaFond  
Mr. & Mrs. Donald Lawrence  
Steven Leuthold  
Wendy Legge  
Maren and Michael Maier  
Andrew Majerski  
Richard McCarthy  
Thomas McCarthy  
Kerry Noyse  
New Morning Windows  
Dennis Nishida  
NSP: Lyndsay Ricker Memorial  
Erik Pedersen  
Stuart Pihlstrom  
Rebecca Planer  
Twin Tone Records  
Richman  
D.E. Robertson  
Mary Seidlitz  
Marilyn Stainker  
John Stoller  
John Turnquist  
Leslie Wells  
Alan Whipple  
Mary Kay Williams  
Zoo Volunteers

### Matching Gifts

A number of corporations in the Twin Cities area match contributions made by their employees. This year the Minnesota Zoo received matching gifts totaling \$4,270 from the following corporations.

Cray Research  
Emerson Electric Company  
First Bank System  
IBM Corporation  
IDS Financial Services, Inc.  
Kraft Foundation  
McGraw-Hill Foundation  
The NCR Foundation  
Northwestern Bell  
St. Paul Companies  
WCCO AM/TV-WLTE FM

### In-Kind Donations

Donations of goods and services provide needed support for the Minnesota Zoo. In fiscal year 1988 goods and services valued at \$1,047,129 were contributed to the Minnesota Zoo.

Apples Associates  
Arby's  
Ask Mr. Foster Travel  
Blue Cross/Blue Shield of Minnesota  
Cities 97  
Coca-Cola  
Larry Connolly  
Cowles Media Company  
Department of Natural Resources  
Distinctive Catering  
Donaldsons  
Frito Lay  
Fuji Film  
Fujitsu Business Communications  
General Mills  
Ron Hofmann  
International Dairy Queen  
Lever Brothers  
National Car Rental  
Betty Lou Nelson  
Rockport Shoes  
Shakopee Valley Printing, Inc.  
St Paul Dental Society  
Bill Ward

(over)

DONORS FOR FY 1987

Donors Over \$10,000

Cowles Media Company  
Donaldsons  
Verna C. Heinemann

Donors \$1,000 - \$10,000

Julie Thorpe Cote Trust  
Deluxe Check Printers Inc.  
Kenneth W. & Carol Lindberg  
Nash Foundation  
Margaret Rivers Fund  
Unisys Corporation  
Elizabeth M. Winston  
Woman's Club of Minneapolis

Donors \$500 - \$999

Michael J. Zwolski  
Nancy Azzam  
Mr. & Mrs. Edward J. Costello  
Cray Research Match  
IBM Match  
Marsh & McLennan, Inc.  
Pepsi Cola Bottling Group  
Dick Pfizer  
Mrs. L. S. Small  
The Smith Foundation

Donors \$100 - \$499

Henry Albrecht Foundation  
American Foundation  
Mr. & Mrs. Ronald Anderson  
Richard Blomquist  
Thomas Crosby  
D. Russel Cummings  
Humane Society -Hennepin Co.  
IDS Match  
Charlotte Jones  
Carol M. Kostich  
Mrs. C.E. Mickley  
Lila M. Nelson  
Mary F. Platt  
Saint Paul Companies Match  
Mr. & Mrs. C.C. Stout  
Town & Country Club  
Warner Holding Company Katherine Anderson

Memorials

Caitlin King Abraham  
David J. Bauer  
Gary Root

Federal grant: \$25,350

State grant: \$4,950,861

Non-operating funds:

Individual	69,064
Foundation	7,110
Corporate	13,376

24. **New Facilities Since Last Reaccreditation Inspection**

Although several species were added (yak, Minnesota fish, grey fox, Asian lions, lion-tailed macaques, coyotes), only minor renovations to existing exhibit spaces was needed.

New facilities include:

Picnic shelter

Wolf exhibit

Caribou exhibits

A temporary exhibit for a golden monkey loan

Koala exhibit requiring major renovation of the Lodge.

Construction began in October 1989 on major renovation of the former indoor dolphin pool in the Tropics building. The \$2.2 million project is being converted into an exhibit for sharks and coral reef fish, expected to open to the public for summer 1991.

## Policy for Animal Emergencies

Animal Injuries, Escapes, High to Low Temperatures,  
Animal Bites, Power Failure, Severe Weather

Animal  
Escapes

### I. Policy

It is the policy of the Minnesota Zoological Garden that:

- 1) Animal emergency situations are supervised by Animal Management/Animal Health personnel.
- 2) Severe weather monitoring will be overseen by the Health and Safety Officer. **(SEE ATTACHED POLICY)**
- 3) The Temperature Warning System functioning the Animal Health Building is overseen by Animal Management, Animal Health, and Physical Facilities. **(SEE ATTACHED POLICY)**

### II. Purpose

The escape of any animal from its enclosure is a potentially dangerous situation. The objective of the Animal Escape Procedures is to rapidly regain control over the animal. In all escapes the priorities are: 1) safeguard the public, 2) minimize danger to the staff, 3) recapture the animal.

The actual response to an animal escape will vary depending upon type of animal, time of day, and place of escape. Regardless of these variables, broad operational guidelines can be established.

### III. Authority

In the event of an animal escape the chain of authority is as follows: curator of section, curator on duty, zoologist of section, zookeeper.

The veterinarians and Director of Biological Programs will be notified immediately upon detection of an escape and will be equal and lateral to the curators and will determine the appropriateness of modes of restraint, assisting in capture.

All other zoo staff are temporarily under the direction of the curator or individual directing the recapture.

If the animal provides a high likelihood to inflict injury the curator in charge, veterinarian or Director of Biological Programs will make the decision if the animal poses a threat great enough to warrant the use of deadly force. **(SEE ATTACHED FIREARMS POLICY)**

If the animal leaves zoo property the Police Department will be notified and will assist the MZG staff in the capture of the escaped animal.

### IV. Reporting

All animal escapes will be identified on the radio by the use of a code word. The following code will be used:

Code Epsilon - refers to an animal escape

Code Red - refers to an animal escape where firearms are required

The first person to discover an animal escape will notify the switchboard by phone (X401) or by radio (4100) that:

*This is individuals name at location (holding area, public area etc.). There is a code \_\_\_\_\_ with animals name and is doing what.*

It is the responsibility of the Switchboard to: (SEE ATTACHED SHEET)

#### Support Teams

The Zoo will be divided into four zones as follows:

- 1) Tropics
- 2) Minnesota
- 3) Northern Trail/Childrens Zoo
- 4) Animal health/Large Animal Holding

Teams will consist of the following:

- TEAM 1 (animal capture)  
- curators, Biological Programs staff and veterinary staff
- TEAM 2 (site security/clear public)  
- custodial staff, operations, first aid
- TEAM 3 (communications)  
- guest services, volunteers, Public Relations

Team 1 will assemble at the sight of the escape. Team 2 will assemble in the custodial office/lunchroom area in the Tropics for escapes. Team 3 will assemble at the guest services desk. Teams 2 will proceed immediately to the zone indicated in the escape secure the area and escort the public from the site of the escape.

#### - Tropics

- team 2 will secure doors at the small bird end of the building, visitor entrance doors in the lower level and the doors exiting into the Marine Mammal viewing area. One member of the team should remain at each of these areas to assure security and stop visitors from entering the area.
- the remaining members of the team should clear the building of public starting from the entrance and moving through the building to the exit. When the building is cleared the people clearing the building should remain at the visitor entrance doors and help explain the situation to the public.

#### - Minnesota

- secure doors at the Beaver Exhibit and Lynx Exhibit. Station one individual at the entrance to the trail by the skunk exhibit. Other members clear the area as above.

#### - Northern Trail/Childrens Zoo

- three members of the team 2 proceed immediately to the childrens zoo gate, heating plant gate and gate to make sure they are secured. They should remain at the gates. Two members of the team should go to the lower Marine Mammal viewing area and the walkway by the macaque ramp and stop visitors from entering the Northern Trail.
- the remaining members of the team should clear the walkway as instructed by the coordinator of team 1.

#### - Animal Health/Large Animal Holding

- three members of team 2 should immediately proceed to gate two, childrens zoo gate and the heating plant gate to make sure they are secure. They should remain at the gates.
- The remaining members of the team should secure the areas as instructed by the coordinator of team 1.

Team 3 will be responsible for communication between visitors, the other teams and first aid as needed.

It is the responsibility of the curator in charge to:

- 1) Coordinate the recapture of the animal.
- 2) Notify the switchboard if evacuation of the visitors is necessary and coordinate team 2 and 3 activities.
- 3) Notify the switchboard that the escaped animal has been captured and the area is safe.
- 4) Notify the MZG Director and the Director of Biological Programs when the animal has been recaptured.

It is important that the recapture efforts be coordinated. It is expected that, upon hearing that an animal has escaped, the appropriate curator or supervisory keeper will assume command and proceed to the site. It is important that command be assumed quickly since an early coordinated response has the best chance of recapturing the animal in or close to its home compound. If the curator or zoologist does not reply promptly, any other curator should assume command. If the curator in charge of the escaped animal is not present, and coordination is assumed by another curator, the most senior keeper in the area should notify the coordinator of his/her presence.

#### V. Problem Animal Situations at the MZG Site

- 1) This includes all MZG animal escapes or injuries other than those previously mentioned. For example, dogs and cats, abnormally acting native wildlife, or foreign objects in an exhibit should immediately be reported to Animal Management staff in the area. If staff are not available the problem should be reported to the MZG switchboard who will notify the appropriate animal management staff.

State the specific location and nature of the problem.

- 2) The capture of the animal or removal of the objects will be coordinated by the curator in charge or other animal management staff.

#### RECOMMENDATIONS:

We recommend that the following equipment be purchased and kept in the locations listed to facilitate capture in animal emergencies.

##### Tiger Barn            Animal Health

- ropes, blow horn, catch pole, nets, fire extinguisher, leather gloves
- immobilization equipment and non-narcotic immobilization agents

##### Isolation Barn

- ropes, blow horn, catch pole, nets, fire extinguisher, leather gloves

##### Animal Health

- ropes, blow horn, catch pole, nets, fire extinguisher, leather gloves

##### Tropics

###### Nocturnal tunnel

- 30 foot rope, 2 nets and 1 snare, leather gloves

###### Near Gibbon Lagoon

- 30 foot rope, 2 nets, 1 snare, ladder, fire extinguisher, leather gloves  
Leopard/Tapir

- 30 foot rope, 2 nets, 1 snare, fire extinguisher,  
Incubator room, leather gloves

- 2 large and 2 small bird capture nets, fire extinguisher  
Brooder Room

- 1 large and 1 small bird capture net

Main Aviary pens

- 4 bird capture nets, mist nets, box trap

#### Zoologists Office

- immobilization equipment and non-narcotic immobilization agents

#### Wolf Exhibit

- hand nets, catch pole, leather gloves

## SWITCHBOARD PROCEDURES

- (1) Immediately contact the curator of the area, if present in the Zoo, or curator on duty. (See Below)
- (2) Group page the area that is affected. (See Group Paging in blue folder)
- (3) Contact the veterinarian on duty via the radio (4161 or 4161 alpha) or the long distance pager and the Director of Biological Programs by long distance pager or by radio.
- (4) Clear the airways. ("All 4100 units your attention please, clear all airways emergency traffic only.")
- (5) Have team members assemble at predetermined locations to await further instructions from escape coordinators.
- (6) Notify Director of escape.
- (7) Follow any other instructions given escape coordinators.

	SUN	MON	TUES	WED	THUR	FRI	SAT
Pichner	OFF	OFF	ON	ON	ON	ON	ON
Reindl	OFF	OFF	ON	ON	ON	ON	ON
Castle	ON	ON	ON	ON	ON	OFF	OFF
Don Carlos	ON	ON	ON	ON	ON	OFF	OFF
Hage	OFF	ON	ON	ON	ON	ON	OFF

CURATOR	RADIO	DEPT.	Contact/Curator's Days Off (Zoologist)
Jimmy Pichner	4178	All Birds	L. Vorwerk 4178 Alpha
Nick Reindl	4172	Northern Trail	B. Geiszler 4172 Alpha
Kathy Castle	4175	Tropics Mammals	M. Nelson 4175 Alpha BJ Schoeberl 4175 Beta
Mike DonCarlos	4173	Minnesota Trail	C. Kline 4173 Alpha
Steve Hage	4177	Zoolab/Child Zoo	K. Guilluame 4165

## Firearms Policy

- 1) Any individual that handles a firearm at the MZG will be certified as having passed a Minnesota Firearms Safety Training Class, other firearms safety class or have had Military Training.
- 2) Any individual certified to handle a firearm at the MZG will be required to shoot a minimum of 5 rounds/MZG firearm 2X/year. Targets will be turned in to the program coordinator, Jimmy Pichner.
  - Since Wednesday afternoon is already set aside for Animal Management this period will be used 2X/year for all the individuals to certify. This places the importance on the program it deserves as well as allows all individuals involved to become comfortable with each others abilities.
- 3) A different shooting range which is closer and has indoor shooting facilities will be sought to provide better conditions for the staff to practice under.
  - Each person must shoot from 25 or 50, and 100 yd. Targets will be filed with the program coordinator.
- 4) Individuals qualified to handle firearms at the MZG.
  - This list is comprised of individuals who satisfy the above requirements and above all feel comfortable handling firearms. Each person must be comfortable with his/her ability to handle a firearm in an emergency situation. Every action with a firearm must be second nature so that the situation at hand (an animal escape) can be effectively and safely dealt with.
  - Any individual who satisfies the above criteria and is approved by the coordinator and the Biological Programs Director can qualify to handle a firearm at MZG. The following is a list of individuals that are qualified to handle MZG firearms as of May 15, 1990.

- Jay Petersen	- Jimmy Pichner
- Steve Hage	- Nick Reindl
- Ron Tilson	- Mike DonCarlos
  - The following individuals are in the process of meeting the requirements at this time and will be added to the list once all criteria are met.

- Peri Wolff	- Kathy Castle
- Brad Geiszler	- Tony Fisher
- Mark Nelson	
- 5) Firearms Locations/Area of Assignment
  - Gun Safes will be located in three areas on zoo site (see attached map). It is each individuals responsibility to be familiar with there location.
    - 1) Zoologists Office on the 2nd floor
    - 2) Necropsy Room in Animal Health
    - 3) Northern Trail Keeper Lunchroom
  - Each gun safe will contain a minimum of a 7mm Remington Magnum, 223 Remington and a 12 gauge shotgun.
  - The zoo will be divided into four zones as per the emergency policy. The shooter should respond to the gun safe he or she is closest to in an emergency situation. The areas are as follows:

- 1) Tropics
- 2) Minnesota
- 3) Northern Trail/Childrens Zoo
- 4) Animal Health/Large Animal Holding

6) Escaped Animal Shooting List

This list is based on the potential danger of the animals. When animals must be shot the public should be removed from the area before shooting occurs if the situation allows (public not in immediate danger). It is imperative that animals, even moderately dangerous, not leave zoo grounds.

- 1) Shoot
  - Siberian tiger
  - puma
  - spotted leopard
  - sloth bear
  - Asian lion
  - lion-tailed macaque
  - Japanese macaque
  
- 2) Shoot depending on situation (animal showing aggression toward human or human in immediate danger)
  - bull elk
  - bull moose
  - wolverine
  - clouded leopard
  - white cheeked gibbon male
  - Canadian lynx
  - wolf
  - musk ox
  
- 3) Don't shoot except under extreme circumstances remainder of collection

**This list is a guideline and the shooter, along with the Curator, Veterinarian, Director of Biological Programs and General Director (all may not be present) share the responsibility to evaluate each situation and make a judgement.**

7) Program needs

- Buy an additional gun safe to be placed in the Northern Trail keeper lunchroom.
- Acquire an additional 22 caliber rifle with 4x scope to be used for pest control.

All individuals will be required to provide their proof of certification to Jimmy Pichner, who will be responsible for overseeing the program and making sure that all records and supplies are kept up to date and equipment is in good repair.

DIRECTOR'S SIGNATURE: *Kathryn Z. Roberts*

NOTIFICATION PROCEDURE FOR ANIMAL EMERGENCIES

POLICY: The MZG dispatcher shall take the following action in the event of an animal emergency to ensure that proper emergency communication procedures are followed in especially hazardous animal emergency situations for the protection of the animal collection, the Animal Management staff, general MZG staff, and the general public.

PROCEDURES:

1. Immediately contact the Curator(s) on duty for that day.\*\*
2. Group page the area that is affected.
3. When directed by the curatorial staff, contact the Vet on duty via the radio (4161 OR 4161 Alpha) or the long distance pager.
4. When directed by the curatorial staff, contact the first aid services personnel to help evacuate the area affected.
5. Clear the airways. ("All 4100 units your attention please, clear all airways, emergency traffic only".)
6. Follow any other instructions you are given by the curatorial staff.

**	<u>Friday</u>	<u>Sunday</u> <u>Saturday</u>	<u>Monday</u>	<u>Tuesday</u>	<u>Wednesday</u>	<u>Thursday</u>
J. Pichner X		OFF X	OFF	X	X	X
J. Petersen OFF		X OFF	X	X	X	X
C. Castle OFF		X OFF	X	X	X	X
N. Reindl X	X	OFF	OFF	X	X	X
S. Hage X	OFF	OFF	X	X	X	X

X = Scheduled day on-site

DIRECTOR'S SIGNATURE: Harvey R. Roberts

#### DISPATCHER FUNCTIONS

POLICY: It shall be the policy of the Minnesota Zoological Garden (MZG) to provide communications and dispatcher functions, seven days a week.

PURPOSE: To ensure the safety of visitors and employees, the security of the site and assets, and efficient operations on a large site through efficient communications including telephones, portable handheld radios, and pager systems.

SCOPE: Primary responsibility for the communications function lies with the Staff Services Office.

#### PROCEDURES:

- A. The radio dispatcher will be physically located with the switchboard operator. The switchboard and dispatcher system will be staffed 7 days a week from 8:00 a.m. until 4:30 p.m. (including holidays) except December 25.
- B. April - September hours: 8:00 a.m. - 6:00 October - March hours: 8:00 a.m. - 4:30 p.m.
- C. Radios are distributed to appropriate staff for safety and operational efficiency. Radios are to be obtained from the charging units (Physical Facilities Office, Curator's Office, and Animal Health Building) for use during duty shifts.
  - a. Advise switchboard/dispatcher what units are in service (your number) 10-8.
  - b. Advise switchboard/dispatcher when going off duty (your number) 10-7.
  - c. Standard radio language (10 series) is to be used. (It is no longer necessary to request permission to talk (10-58 and 10-59) through the dispatcher.) The only instances in which radio to dispatch contact is to be used is when radio to radio communication is not possible because of blind areas.
- D. A pager system is used in addition to radio for communications from isolated locations and to ensure availability of staff. To page one of the 48 staff carrying pagers, call the dispatcher at x401. The system provides for group emergencies.
- E. EXTENSION x400 IS TO BE CALLED FOR EMERGENCIES ONLY, SUCH AS A CALL FOR FIRST AID ASSISTANCE, AN ANIMAL EMERGENCY, FIRE OR OTHER NATURAL DISASTERS.

MINNESOTA ZOOLOGICAL GARDEN  
EMERGENCY EVACUATION  
PLAN  
JUNE 1989

Evacuation  
Plan

## TABLE OF CONTENTS

	PAGE NUMBER
<b>OVERVIEW</b>	<b>1</b>
I. Notification	2
II. Telephone Tree	3
III. Safe Areas	4
IV. Evacuation Groups	5
V. Outside Evacuation	6
VI. Full Evacuation	10
VII. All Clear	11
Addenda	
Group I Checklist	13
Group II Checklist	14
Group III Checklist	16

## MZG SEVERE WEATHER EVACUATION PLAN

OVERVIEW: This plan is designed for the protection of the visitors, volunteers and employees of the Minnesota Zoological Garden in the event of severe weather. It is intended to provide Zoo staff with procedures to be followed in the event of a weather related emergency. Severe weather notifications will be based solely on the **NATIONAL WEATHER SERVICES WEATHER SERVICES WATCH AND WARNING SYSTEMS**. The decision to activate the evacuation procedures will be made by the following:

**General Director  
Management Duty Officer  
Assistant Directors  
Senior Curator on Duty**

In the absence of the above:

**First Aid Staff on Duty**

**OUTSIDE EVACUATION** procedures will be implemented for **SEVERE THUNDERSTORM WARNINGS** and **TORNADO WARNINGS** by the above individuals taking into consideration the local weather conditions. The objective of the **OUTSIDE EVACUATION** is to get all guests into the Main Building Complex as soon as possible. A **FULL EVACUATION** will be implemented in the event of a **TORNADO WARNING**. The objective of the **FULL EVACUATION** is to direct guests to designated areas that are considered the "safest" areas available on the Zoo site.

## I. NOTIFICATION:

- A. Each time the "weather radio" announces a weather **WATCH/WARNING**, even though it may not include Dakota County, the Management Duty Officer and Northern Trail Staff shall be advised of the announcement and area of coverage by the MZG Dispatcher.
- B. When directed by management personnel to put into action the evacuation plan, the following steps shall be taken by the Dispatcher in the order listed:

### OUTSIDE EVACUATION

- (a) Activate the telephone tree. The Dispatcher will ask the Duty Officer or other staff person in the vicinity to place telephone tree calls. Message to be transmitted -- **"Outside evacuation procedures are now in effect. Please report to your assigned area."** (Telephone tree on page 4.)
- (b) Radios (both tones) state: **"All 4100 units, your attention please, all personnel report to your assigned areas for Outside Evacuation."**
- (c) Group page all units and state: **"All personnel report to your assigned areas for Outside Evacuation."** Please group page in the following order: **600, 633, 611, 622, 644, 655**. You will also need to page **606** (Volunteer Day Captain) separately as well as long distance pager **622-0059** (Ross Taylor/Northern Trail) with the same message.
- (d) P.A. announcement will be made by Guest Services staff or designee: **"Your attention please, there is severe weather in the area. Please remain indoors until further notice. All staff and volunteers report to your assigned area." This will be followed by slow beeping for 30 seconds.**

### FULL EVACUATION

- (a) Activate the telephone tree. The MZG Dispatcher will ask the Duty Officer or other staff person in the vicinity to place telephone tree calls. Message to be transmitted -- **"Full evacuation procedures are now in effect. Please direct visitors to safer areas"**.
- (b) Radios (both tones) state: **"All 4100 units your attention please, Full Evacuation procedures are now in effect. Please direct visitors to safe areas"**.
- (c) Group Page all units and state: **"Full Evacuation procedures are now in effect. Please direct visitors to safe areas"**. Please group page in the following order: **600, 633, 611, 622, 644, 655**. You will also need to page **606** (Volunteer Day Captain) separately as well as long distance pager **622-0059** (Ross Taylor/Northern Trail).
- (d) P.A. announcement will be made by Guest Services Staff or designee **"High winds and possible tornadoes have been reported. Please follow the direction of Zoo staff members in your area"**. This will be followed by rapid beeping for 30 seconds.

TELEPHONE NOTIFICATION SYSTEM  
JUNE 1989

Dispatcher or Duty Officer or Other Designee

Dairy Queen	432-0632
Education	Ext. 234
Gift Shop	Ext. 210
Ann Seefeldt	Ext. 271
Main Kitchen	Ext. 290
Garage	Ext. 250
Greenhouse	Ext. 281
Zoolab	Ext. 239
"B" Building	Ext. 312/if no answer Ext. 225
"A" Building	Ext. 263/if no answer Ext. 262

## II. DESIGNATED AREAS

**This is a listing of the safest areas available on the Zoo site in the event that a Tornado/Full Evacuation is called:**

TROPICS NOCTURNAL HALLWAY  
DOLPHIN/CORAL REEF RAMP  
AQUARIUM RAMP  
AQUARIUM AREA  
MINNESOTA NOCTURNAL  
ALL RESTROOMS IN THE MAIN BUILDING COMPLEX  
SERVICE TUNNELS  
LOWER LEVEL OF "A" BUILDING  
THEATER (USE LAST)

**If the above areas fill, the following areas should be utilized:**

MINNESOTA FISH TANK HALLWAY AWAY FROM GLASS  
2ND AND 3RD FLOOR HALLWAYS AND ROOMS AWAY FROM GLASS  
GUEST SERVICES SUPERVISOR'S OFFICE  
MECHANICAL AREAS IN SERVICE TUNNELS  
ANY DITCH OR DEPRESSION  
NORTHEAST SIDE OF ANY HILL

**The following areas should be avoided:**

TROPICS  
EDUCATION WING, CLASSROOM, OFFICE, ZOOLAB  
INDOOR VIEWING AREA FOR UPPER DOLPHIN  
ALL OUT BUILDINGS  
GREENHOUSE  
"B" BUILDING  
GARAGE  
TOP LEVEL OF "A" BUILDING  
MONORAIL MAINTENANCE  
ALL OTHER GLASS WALLED AREAS  
VEHICLES  
OUTDOOR EXPOSED AREAS

### III. EVACUATION GROUPS

- A. The following is a listing and composition of the three primary evacuation groups' and Group Leader:

**GROUP 1:            Building Services Staff and Building Maintenance Staff.**

REPORT TO:            Building Services or Maintenance Supervisor's Office.  
GROUP LEADER:        Building Services Supervisor or Designee and Building  
                                 Maintenance Supervisor or Designee.

**GROUP II:            Skytrail Drivers and Station Staff, Audio Visual, Interpretive Programs, Guest Services, Custodial/Maintenance, Gift Shop, Second and Third Floor Personnel, Volunteers.**

REPORT TO:            Indoor Theater.  
GROUP LEADER:        Guest Services Supervisor on duty.

**GROUP III:            Aquarium and Marine Mammal Staff.**

REPORT TO:            Indoor Viewing Area for Outdoor Pool.  
GROUP LEADER:        Senior Marine Mammal Staff on duty or Senior Aquarium Staff on duty.

- B. In addition to the above groups, the following staff responsibilities will apply:

- (1) Engineers will standby at their work locations and handle any mechanical problems that may arise.
- (2) All Curators and Zookeepers not listed in the above groups will secure animals as necessary and stay with them until the ALL CLEAR is given. Any extra personnel will be sent to the theater for assignment. In the case of a FULL EVACUATION, proceed to one of the safe areas.
- (3) Internal Services and Horticulture staff should suspend all outside activities and be prepared to proceed to a safe area in the event of a FULL EVACUATION.
- (4) Internal Services and Horticulture staff working in the main building complex area are to report to the theater for assignment.
- (5) Electrical Supervisor and Electrician staff will standby to switch electrical load at "F" mechanical room in main building and mechanical room in "A" building.
- (6) Monorail Electricians will secure all monorail trains after getting passengers off and will turn off all power on tracks if possible. They will then report to "F" mechanical for further instructions from Electrical Supervisor.

#### IV. OUTSIDE EVACUATION:

An OUTSIDE EVACUATION will be instituted in the event of a TORNADO WARNING or SEVERE THUNDERSTORM WARNING.

**OBJECTIVE: To get all guests into the Main Building Complex as soon as possible.**

##### A. GROUP I:

1. **MEET AT:** The Building Services Office
2. **RESPONSIBILITIES:** Direct all visitors on the Northern Trail, picnic grounds and parking lots into the Main Building Complex.
3. **PROCEDURES:**
  - A. One vehicle will make a sweep of the picnic grounds and parking lots.
  - B. Two vehicles will make a complete sweep of all Northern Trail pathways.
  - C. Station one vehicle on the Northern Trail walkway by the service road that runs behind the Children's Zoo.
  - D. Station the second vehicle on the Northern Trail at the northeast corner of the Tiger viewing area.
  - E. DO NOT let anyone back onto the Northern Trail.
4. GROUP LEADER WILL DIRECT ADDITIONAL STAFF TO THE THEATER FOR ASSIGNMENT.
5. **GROUP LEADER WILL RADIO THE SWITCHBOARD WHEN AREAS HAVE BEEN SECURED.**

## B. GROUP II:

1. **MEET AT:** Theater
2. **RESPONSIBILITIES:** Direct all guests to or advise guests to remain in the Main Building Complex.
3. **PROCEDURES:**

### Send assistants to:

**(If possible, send a person to Group 3 who has a radio)**

- A. Children's Zoo - clear - visitors to return to Main Building. Remain at the Children's Zoo foot bridge until entire area is cleared. Return to theater when assignment is complete.
- B. Lodge - clear - visitors to return to the Main Building. Return to theater when assignment is complete.
- C. Lakeside D.Q. area and Amphitheater - clear - visitors to return to Main Building. Return to theater when assignment is complete.
- D. West Education wing doors - visitors to remain indoors.
- E. Lower Plaza doors - visitors to remain indoors.
- F. Outdoor stairway - lower level by outdoor tank - visitors to remain indoors at D.Q. This person should stop at the main D.Q. first to determine if Manager is aware that we are in an evacuation procedure.
- G. Snow Monkey ramp - lower level - visitors indoors - pit area.
- H. Tropics - NE corner - glass doors - no one outside - visitors to Nocturnal if FULL EVACUATION is called.
- I. Main D.Q. - outside doors - visitors to remain indoors.

Those of you assigned to the following location will report, but no action will be necessary unless a FULL EVACUATION is called. If a FULL EVACUATION is called, direct visitors to remain in the safe area you are currently in or if that area fills to capacity, open the emergency exit door so visitors may enter the tunnel areas. Be sure to check the area yourself as soon as you arrive so that you know which way to direct visitors. All visitors should line up next to the wall on both sides as you direct them. Additional staff will be assigned to assist you as available. Remain with visitors until the ALL CLEAR is given.

- J. Tropics - emergency exit across from the Gibbons.
- K. Tropics - emergency exit in the Dolphin/Coral Reef ramp.
- L. Tropics - emergency exit Nocturnal.

As additional staff become available, assign them to the following areas:

M. Tropics - emergency exit across from Gibbons.

N. Tropics - emergency exit in Dolphin/Coral Reef ramp.

O. Tropics - emergency exit in Nocturnal.

P. Send three staff to Indoor Viewing area for the Outdoor tank to assist other group.

**4. GROUP LEADER WILL RADIO SWITCHBOARD WHEN ALL AREAS HAVE BEEN SECURED.**

**D. GROUP III:**

1. **MEET AT:** Upper Indoor Viewing area for Outdoor tank.
2. **RESPONSIBILITIES:** Directing all guests into the Main Building Complex from Upper Plaza.  
  
Direct all guests entering from East and/or South Admissions to Indoor Viewing area for Outdoor tank entrance.
3. **PROCEDURES:**
  - A. Station staff by the doors at the Indoor Viewing area for Outdoor tank.
  - B. Station staff by East Admissions.
  - C. Station staff by South Admissions.
4. **IF POSSIBLE, ALERT THE SWITCHBOARD OPERATOR THAT AREA HAS BEEN SECURED.**

## V. FULL EVACUATION:

A FULL EVACUATION will be instituted in the event of a TORNADO WARNING. In all cases when the guests have been secured, staff will remain with them to keep them calm. Non-assigned Curators and Zookeepers will immediately increase the light levels.

In addition to the OUTSIDE EVACUATION procedures, the following additional group responsibilities are in effect in the case of a FULL EVACUATION:

### GROUP I

1. DRIVE TO THE MAIN BUILDING.
2. The vehicle at the northeast corner of the Tiger viewing is to proceed to the stairs by the Main D.Q. and assist clearing guests from the Main D.Q. to the tunnels via the D.Q. kitchen.
3. The vehicle in position near the Children's Zoo is to proceed to the Education wing doors by the Monorail ticket booth and assist clearing the Education wing, directing guests to the theater; 2nd floor; 3rd floor; and restrooms as necessary.
4. The vehicle in the picnic/parking area will proceed to the Main Building Complex to take cover.

### GROUP II

1. Secure all cash drawers and direct guests from the Guest Services and pit area to the tunnels and 2nd and 3rd floor via the stairwell; **DO NOT USE THE ELEVATOR.**
2. Clear guests from the Tropics door near D.Q. to the front entry.
3. Staff will stay at the lower entrance doors until the area is clear.
4. As staff become available, start clearing visitors from the Tropics Trail exit into the Aquarium and ramp area.
5. Staff already stationed at the emergency exit doors in the Tropics will direct visitors into the tunnels as necessary.
6. The theater will be filled last allowing for stragglers.

### GROUP III

1. Direct visitors from the Indoor Viewing area for the Outdoor tank, Tropics area, Tropics ramp, and Minnesota Exterior to the Minnesota Nocturnal, and Aquarium viewing and ramp areas.
2. When these areas become saturated, direct guests to the tunnels via the stairs by the exit to the Minnesota exhibit and/or through filter room.
3. Staff will stay with the guests to keep them calm.

## VI. ALL CLEAR

When the ALL CLEAR has been issued by the Weather Radio, the Dispatcher will:

- A. Contact the Management Duty Officer who will evaluate the situation at the Zoo. When he/she has determined the weather situation has stabilized, the following steps will be taken by the Dispatcher :
- (1) Contact the Northern Trail staff by radio - advise he/she to check fence-lines for problems, and to advise Dispatcher when all animals have been accounted for and there is no fear of loose animals.
  - (2) Contact Group 1 Leader on duty by radio - advise he/she of ALL CLEAR - direct them to check the Northern Trail walkway, parking lots, picnic areas for problems, to post staff in vehicles on Northern Trail walkways and to keep the walkway closed until further notice.
  - (3) Upon notification from the Northern Trail staff that all animals are accounted for, ask permission of Management Duty Officer to pass on the ALL CLEAR to all staff and visitors. When granted the Dispatcher will:
    - (a) Advise duty officer or other person in the vicinity, the telephone to activate the telephone tree to give the **ALL CLEAR** message.
    - (b) Radio (both tones) and state: **"All 4100 units the ALL CLEAR has been issued, please escort visitors to public areas."**
    - (c) Group page all units and state: **"The ALL CLEAR has been issued, please escort visitors to public areas."** Remember to page in the following order: **600, 633, 611, 622, 644, 655**. Also remember to page separately **606** (Volunteer Day Captain) and long distance pager **622-0059** (Ross Taylor/Northern Trail) with the same message
    - (d) P.A. announcement will be made by Guest Services or designee: **"Your attention please, the ALL CLEAR has been issued. Please continue your visit, and thank you for your cooperation." This will be followed by a 30 second constant tone.**
- \*\*Please note: The ALL CLEAR message may be modified depending on facility/animal problems (i.e. the message may include: "Northern Trail closed until further notice").**
- B. When the ALL CLEAR has been issued via the communications system, the THEATER WILL BE CLEARED FIRST AS THIS WILL BE THE TRIAGE AREA.
- C. All staff will return to the doors they were assigned to prior to the FULL EVACUATION to prohibit any guests from going outside until the safety of the Northern Trail and/or others has been assured.

D. Assist the guests out of the safe areas and into the Tropics, Guest Services or the pit area.

E. Any guest or employee requiring first aid will be brought to the theater for first aid. If there is a person injured and is unable to be moved, call the first aid services staff by radio, contact the Dispatcher with the vital information, or send a runner to the theater to report it.

## GROUP I CHECKLIST

**GROUP LEADER: Building Services Supervisor/Building Maintenance Supervisor.**

### OUTSIDE EVACUATION

- \_\_\_\_\_ 1. One staff person and vehicle will advise guests in the picnic area and all grass areas of the weather situation and suggest that visitors either return to the main building or leave Zoo site.
- \_\_\_\_\_ 2. Send two staff, each in a vehicle, to sweep the Northern Trail advising guests to return to the main building. Upon completion of the sweep, one vehicle will park at the back door of the Education hallway. The second vehicle will park by the main D.Q. Each will advise guests entering the Northern Trail of the weather condition and suggest they return to the main building for their safety.
- \_\_\_\_\_ 3. Additional staff will report to the theater for assignment.

### FULL EVACUATION

- \_\_\_\_\_ 1. The South vehicle will drive up to the Education wing and the employee will assist in clearing the Education wing.
- \_\_\_\_\_ 2. The North vehicle will drive up to the Main D.Q. and assist in clearing guests through the kitchen to the tunnels.
- \_\_\_\_\_ 3. The Picnic vehicle will advise those remaining in the picnic grounds and/or grass areas of the change in weather conditions, then immediately report to the main building to take cover.
- \_\_\_\_\_ 4. Advise 4100 when areas have been secured.

### ALL CLEAR

- \_\_\_\_\_ 1. Upon receiving the ALL CLEAR, the Northern Trail vehicles will immediately check the Northern Trail walkways for visitor safety problems as well as animal exhibit fences that are visible from the walkway.
- \_\_\_\_\_ 2. The picnic vehicle will check the picnic area and parking lot for damage and/or injuries.
- \_\_\_\_\_ 3. Advise 4100 of problems noted. Attempt to clear brush and debris.

## GROUP II CHECKLIST

GROUP LEADER: Guest Services Supervisor

### OUTSIDE EVACUATION

**\*\*\*If you have a person with a radio, send them to Group 3 immediately.**

- \_\_\_\_\_ 1. Children's Zoo - clear - visitors to return to the main building. Remain at the Children's Zoo foot bridge until entire area is cleared. Return to theater when assignment is complete.
- \_\_\_\_\_ 2. Lodge - clear - visitors to return to main building. Assist in clearing the Children's Zoo. Return to theater when assignment is complete.
- \_\_\_\_\_ 3. Lakeside D.Q. area and amphitheater - clear - visitors to return to the main building. Return to the theater when assignment is complete.
- \_\_\_\_\_ 4. West Education wing doors - visitors to remain indoors.
- \_\_\_\_\_ 5. Lower plaza doors - visitors to remain indoors.
- \_\_\_\_\_ 6. Outside stairway - lower level by outdoor tank - visitors to remain indoors at D.Q. Also stop at D.Q. to let Manager know of impending weather.
- \_\_\_\_\_ 7. Snow Monkey ramp - lower level - visitors indoors - pit area.
- \_\_\_\_\_ 8. Tropics - NE corner - glass doors - none outside - visitors to Nocturnal if FULL EVACUATION is called.
- \_\_\_\_\_ 9. Main D.Q. - outside doors - visitors to remain indoors.

\*\*\*\*\*  
Those of you assigned to the following locations will report, but no action will be necessary unless a FULL EVACUATION is called. **If a FULL EVACUATION is called**, direct visitors to remain in the safe area you are currently in or if that area fills to capacity, open the emergency exit door so visitors may enter the tunnel areas. Be sure to check the area yourself as soon as you arrive so that you know which way to direct visitors. All visitors should line up next to the wall on both sides as you direct them. Additional staff will be assigned to assist you as available. Remain with visitors until the ALL CLEAR is given.  
\*\*\*\*\*

- \_\_\_\_\_ 10. Tropics - emergency exit across from the Gibbons.
- \_\_\_\_\_ 11. Tropics - emergency exit in the Dolphin/Coral Reef ramp.
- \_\_\_\_\_ 12. Tropics - emergency exit in Nocturnal.

As additional staff become available, assign them to the following areas:

- \_\_\_\_\_ 13. Tropics - emergency exit across from the Gibbons.
- \_\_\_\_\_ 14. Tropics - emergency exit in the Dolphin/Coral Reef ramp.

\_\_\_\_\_ 15. Tropics - emergency exit in Nocturnal.

\_\_\_\_\_ 16. Send three staff to Indoor Viewing for Outdoor tank to assist other group.

\_\_\_\_\_ 17. Advise 4100 when all areas have been secured.

**ALL CLEAR**

Assign staff to all exterior doors and allow no one outside until the Northern Trail has been checked and found safe by Animal Management staff and Operations staff.

Assign staff to the following locations:

\_\_\_\_\_ 1. West Education wing doors.

\_\_\_\_\_ 2. Both sets of Lower plaza doors.

\_\_\_\_\_ 3. Main D.Q. doors.

\_\_\_\_\_ 4. Outside doors at Indoor Viewing for Outdoor tank.

## GROUP III CHECKLIST

**GROUP LEADER:** Senior Marine Mammal Trainer or Aquariums Staff

### OUTSIDE EVACUATION

- \_\_\_\_\_ 1. Meet at Indoor Viewing for Outdoor tank.
- \_\_\_\_\_ 2. Direct guests on Upper Plaza into the main complex.
- \_\_\_\_\_ 3. Direct guests entering East and South Guest Services to Indoor Viewing for Outdoor tank.

Assign staff to the following locations:

- \_\_\_\_\_ 1. Doors to outside at Indoor Viewing for Outdoor tank.
- \_\_\_\_\_ 2. East Admissions
- \_\_\_\_\_ 3. South Admissions

ALLOW NO ONE OUTSIDE.

- \_\_\_\_\_ 4. Advise 4100 when all areas have been secured.

### FULL EVACUATION

Direct guests to the following safe areas:

- \_\_\_\_\_ 1. Minnesota Nocturnal
- \_\_\_\_\_ 2. Dolphin/Coral Reef ramp
- \_\_\_\_\_ 3. Aquarium Tree

If the safe areas become saturated, direct visitors into the tunnels via the stairway by the Minnesota Nocturnal and through the filter room near the aquariums.

- \_\_\_\_\_ 4. Staff will stay with the visitors to keep them calm.
- \_\_\_\_\_ 5. Advise 4100 when all areas have been secured.

### ALL CLEAR

When the ALL CLEAR is given, proceed to the area assigned to prior to the FULL EVACUATION to prohibit visitors from going outside until the safety of the Northern Trail is assured.

Status of AMPHIBIA Inventory  
MINNESOTA ZOOLOGICAL GARDEN

Report Start Date:  
1 Jan 1989

Report End Date:  
31 Dec 1989

*Prepared 20 March 1990*

Summary:

	Specimens Owned at institution =====	Specimens Owned on Loan Out =====	Specimens Not Owned on Loan In =====
Status 1 Jan 1989	5	0	0
Births	0	0	0
Other Acquisitions	0	0	0
Deaths	3	0	0
[Deaths < 30 days [ of Birth            ]]	0	0	0
[Deaths < 30 days [ of Other Acq.     ]]	0	0	0
Other Dispositions	0	0	0
Status 31 Dec 1989	3	0	0

Total Specimens owned by MINNESOTA: 3

Legend:

- 1.1.1 = specimen counts as males.females.unknown sex
- 1.1.1 = specimens on Loan Out from MINNESOTA
- +1.1.1 = specimens on Loan In to MINNESOTA

*out on loan not also on site*

<p>1 Orders on site</p> <p>2 Families on site</p> <p>2 Species on site</p> <p>3 Specimens on site</p>	<p>∅ Orders</p> <p>∅ Families</p> <p>∅ Species</p> <p>∅ Specimens</p>
---	---

Status of AMPHIBIA Inventory

Report Start Date:  
1 Jan 1989

MINNESOTA ZOOLOGICAL GARDEN  
*Prepared 20 March 1990*

Page 1  
Report End Date:  
31 Dec 1989

-----  
 Identification      Status    |        | Other    | Deaths    | [ < 30 days |    | Other    | Status    Grp  
                          01/01/89 | Births   | Acquis'n |            | Births    Acquis'n | Dispos'n | 31/12/89    Cnt  
 -----

AMPHIBIA

ANURA

HYLIDAE

LITORIA INFRAFRENATA  
new guinea tree frog

0. 0. 4        .        .        0. 0. 3 [        .        ]        .        0. 0. 1

RANIDAE

PYXICEPHALUS ADSPERSUS  
african bullfrog

0. 0. 2        .        .        .        [        .        ]        .        0. 0. 2

Report Start Date:  
1 Jan 1989

Status of REPTILIA Inventory  
MINNESOTA ZOOLOGICAL GARDEN  
*Prepared 20 March 1990*

Page 1  
Report End Date:  
31 Dec 1989

Identification	Status	Other	Deaths	[ < 30 days ]		Other	Status	Grp
	01/01/89	Births	Acquis'n	Births	Acquis'n	Dispos'n	31/12/89	Cnt
REPTILIA								
CHELONIA CRYPTODIRA								
EMYDIDAE EMYDINAE								
CHRYSEMYS PICTA BELLI western painted turtle	1.1	0.0.1	.	[ .	. ]	0.0.1	1.1	
CLEMMYS INSCULPTA wood turtle	.	.	0.0.2	[ .	. ]	.	0.0.2	
EMYDOIDEA BLANDINGII blanding's turtle	.	.	0.0.2	[ .	. ]	.	0.0.2	
GRAPTENYS OUACHITENSIS OUACHITENSIS ouachita map turtle	1.1	.	.	[ .	. ]	.	1.1	
TERRAPENE CAROLINA BAURI florida box turtle	1.0	.	.	[ .	. ]	.	1.0	
TERRAPENE CAROLINA CAROLINA eastern box turtle	1.0	.	.	[ .	. ]	.	1.0	
TESTUDINIDAE								
GEOCHELONE ELEGANS star tortoise	- 1.0	.	.	[ .	. ]	.	0.0	
INDOTESTUDO ELONGATA elongated tortoise	2.2.3	0.0.3	.	0.1	[ .	. ]	0.0.3	2.1.3
MANOURIA EMYS (unk subsp) asian brown / burmese tortoise	2.4	.	.	0.1	[ .	. ]	.	2.3
CROCODYLIA								
CROCODYLIDAE CROCODYLINAE								
TOMISTOMA SCHLEGELII false gavial	1.1	.	.	[ .	. ]	.	0.0	
	+ 0.1					- 1.1 + 0.1	- 1.1	
SQUAMATA SAURIA								
AGAMIDAE								
ACANTHOSAURA ARMATA mountain horn-headed lizard	1.0	.	.	[ .	. ]	.	1.0	
CALOTES VERSICOLOR bloodsucker	0.0.23	0.0.37	.	0.0.58	[ 0.0.27	0.0.31 ]	.	0.0.2
HYDROSAURUS PUSTULATUS philippine sail-finned water dragon	0.0.4	.	.	0.0.2	[ .	0.0.2 ]	.	0.0.2
ANGUIDAE								
OPHISAURUS APODUS scheltopusik/glass lizard	1.0.1	.	.	[ .	. ]	.	1.0.1	

**Status of REPTILIA Inventory**  
MINNESOTA ZOOLOGICAL GARDEN

Report Start Date:  
1 Jan 1989

Page 2  
Report End Date:  
31 Dec 1989

Identification	Status	Other	Deaths	[ < 30 days ]		Other	Status	Grp
	01/01/89	Births	Acquis'n	Births	Acquis'n	Dispos'n	31/12/89	
<b>GEKKONIDAE</b>								
EUBLEPHARIS MACULARIUS leopard gecko	2. 3	.	.	[ .	. ]	.	2. 3	
GEKKO GEKKO tokay gecko	5. 7. 6	.	.	0. 0. 5 [ .	. ]	.	5. 7. 1	2
<b>IGUANIDAE</b>								
IGUANA IGUANA green iguana	1. 2	.	.	[ .	. ]	1. 0	0. 2	
<b>SCINCIDAE</b>								
TILIQUA GERRARDII pink-tongued skink	0. 0. 4	.	.	0. 0. 1 [ .	. ]	.	0. 0. 3	
TILIQUA SCINCOIDES (unk subsp) blue-tongued skink	.	.	.	[ .	. ]	.	0. 0	
	- 1. 0						- 1. 0	
<b>VARANIDAE</b>								
VARANUS SALVATOR (unk subsp) malayan water monitor	1. 1	.	.	[ .	. ]	.	1. 1	
<b>SQUAMATA SERPENTES</b>								
<b>BOLIDAE BOINAE</b>								
BOA CONSTRICTOR (unk subsp) boa constrictor	0. 1	.	1. 0	[ .	. ]	.	1. 1	
BOA CONSTRICTOR CONSTRICTOR boa constrictor	1. 1	.	.	[ .	. ]	.	1. 1	
<b>BOLIDAE PYTHONINAE</b>								
PYTHON CURTUS (unk subsp) blood python	1. 1	.	.	[ .	. ]	.	1. 1	
PYTHON MOLURUS BIVITTATUS burmese python	1. 0	.	.	[ .	. ]	.	1. 0	
<b>COLUBRIDAE</b>								
CHRYSOPELEA ORNATA flying snake	.	.	.	[ .	. ]	.	0. 0	
	- 1. 0						- 1. 0	
ELAPHE GUTTATA GUTTATA cornsnake/red ratsnake	1. 0	.	.	[ .	. ]	.	1. 0	
ELAPHE VULPINA VULPINA western fox snake	1. 0	.	.	[ .	. ]	.	1. 0	
GONYOSOMA OXYCEPHALA red-tailed ratsnake	1. 1	.	.	[ .	. ]	.	1. 1	

1/16/11

Report Start Date:  
1 Jan 1989

Status of REPTILIA Inventory  
MINNESOTA ZOOLOGICAL GARDEN

Page 1  
Report End Date:  
31 Dec 1989

Identification	Status		Other	Deaths	[ < 30 days ]		Other	Status	Grp
	01/01/89	Births	Acquis'n		Births	Acquis'n	Dispos'n	31/12/89	Cnt
HETERODON NASICUS (unk subsp) western hognose snake	2.0	.	.	.	[ .	. ]	.	2.0	
LAMPROPELTIS GETULUS CALIFORNIAE california kingsnake	1.0	.	.	1.0	[ .	. ]	.	0.0	
PITUOPHIS MELANOLEUCUS SAYI bullsnake	1.3	.	0.1	0.1	[ .	. ]	.	1.3	
VIPERIDAE CROTALINAE CROTALUS HORRIDUS HORRIDUS timber rattlesnake	1.1	.	.	.	[ .	. ]	.	1.1	

01/13

**Status of REPTILIA Inventory**

Report Start Date:  
1 Jan 1989

MINNESOTA ZOOLOGICAL GARDEN

Report End Date:  
31 Dec 1989

**Summary:**

	Specimens Owned at institution =====	Specimens Owned on Loan Out =====	Specimens Not Owned on Loan In =====
Status 1 Jan 1989	102	3	1
Births	41	0	0
Other Acquisitions	6	0	0
Deaths	70	2	0
[Deaths < 30 days [ of Birth            ]]	27	0	0
[Deaths < 30 days [ of Other Acq.    ]]	5	0	0
Other Dispositions	5	2	1
Status 31 Dec 1989	72	3	0

Total Specimens owned by MINNESOTA: 75

Non-Accessioned Group Counts: 2

$$\begin{array}{r} 0 \\ 72 \\ + 2 \\ \hline 74 \\ \text{on site} \end{array}$$

**Legend:**

- 1.1.1 = specimen counts as males.females.unknown sex
- 1.1.1 = specimens on Loan Out from MINNESOTA
- +1.1.1 = specimens on Loan In to MINNESOTA

<i>On site</i>	<i>Out on loan not also on site</i>
<i>3 - Orders</i>	<i>0 - Orders</i>
<i>10 - Families</i>	<i>0 - Families</i>
<i>25 - Species</i>	<i>2 - Species</i>
<i>74 - Specimens</i>	<i>3 - Specimens</i>

Report Start Date:  
1 Jan 1989

Status of AVES Inventory  
MINNESOTA ZOOLOGICAL GARDEN  
*Prepared 20 March 1990*

Page 1  
Report End Date:  
31 Dec 1989

Identification	Status	Other	Deaths	[ < 30 days ]		Other	Status	Grp
	01/01/89	Births	Acquis'n	Births	Acquis'n	Dispos'n	31/12/89	Cnt
AVES								
GAVIIFORMES								
GAVIIDAE								
GAVIA IMMER common loon	0.1	.	0.0.1	0.1.1	[ .	0.0.1 ]	.	0.0
PELECANIFORMES								
PELECANIDAE								
PELECANUS ERYTHORHYNCHOS american white pelican	5.2	.	.	0.1	[ .	.	] .	5.1
CICONIIFORMES								
ARDEIDAE								
EGRETTA THULA snowy egret	0.0.1	.	.	0.0.1	[ .	.	] .	0.0
THRESKIORNITHIDAE								
THRESKIORNIS MELANOCEPHALUS (no sub black-headed ibis	3.3.1	0.0.1	.	1.1	[ .	.	] .	2.2.2
PLATALEA LEUCORODIA (no subsp) white spoonbill	2.3	.	.	.	[ .	.	] .	2.3
PHOENICOPTERIDAE								
PHOENICONAIAS MINOR lesser flamingo	16.7	.	.	0.1	[ .	.	] .	16.6
ANSERIFORMES								
ANATIDAE								
ANSER ANSER (no subsp) toulouse / greylag goose	1.3	.	.	.	[ .	.	] .	1.3
ANSER CAERULESCENS CAERULESCENS lesser snow goose / blue goose	8.5	1.0	.	.	[ .	.	] .	9.5
BRANTA RUFICOLLIS red-breasted goose	3.2	.	.	.	[ .	.	] .	1.0 - 2.2 - 2.2
CYGNUS CYGNUS BUCCINATOR trumpeter swan	16.13 - 1.1 + 1.1	0.0.12	0.1	0.1.3	[ 0.0.1 .	] 9.3 - 0.1	.	7.9.9 - 1.2 + 1.1
DENDROCYGNA ARCUATA (no subsp) wandering whistling duck	6.3	0.0.1	.	0.0.1	[ 0.0.1 .	] .	.	6.3
AIX GALERICULATA mandarin duck	4.2	.	.	0.1	[ .	.	] .	4.1
AIX SPONSA north american wood duck	8.6	0.0.18	.	4.0.10	[ 0.0.10 .	] 0.0.8	.	4.6

Report Start Date:  
1 Jan 1989

Status of AVES Inventory  
MINNESOTA ZOOLOGICAL GARDEN

Page 2  
Report End Date:  
31 Dec 1989

Identification	Status	Other	Deaths	[ < 30 days ]		Other	Status	Grp
	01/01/89	Births	Acquis'n	Births	Acquis'n	Dispos'n	31/12/89	Cnt
ANAS ACUTA (no subsp) pintail	1. 2	.	.	.	[ . . ]	.	1. 2	
ANAS AMERICANA american wigeon	.	.	2. 2	.	[ . . ]	.	2. 2	
ANAS CLYPEATA common shoveler	1. 1	.	2. 2	1. 2	[ . . ]	.	2. 1	
ANAS CRECCA (no subsp) green-winged teal	2. 2	.	.	.	[ . . ]	.	2. 2	
ANAS FALCATA (no subsp) falcated duck	3. 3	.	.	0. 1	[ . . ]	.	3. 2	
ANAS FORMOSA baikal teal	2. 3	0. 0. 1	.	1. 1. 1	[ 0. 0. 1 . ]	.	1. 2	
ANAS PENELOPE eurasian wigeon	1. 2	.	.	.	[ . . ]	.	1. 2	
ANAS PLATYRHYNCHOS (no subsp) mallard / rouen	2. 2	0. 0. 5	.	0. 2. 1	[ . . ]	1. 0. 3	1. 0. 1	
ANAS QUERQUEDULA garganey	3. 2	.	.	1. 1	[ . . ]	.	2. 1	
ANAS STREPERA (no subsp) gadwall	2. 2	.	.	0. 2	[ . . ]	.	2. 0	
AYTHYA AFFINIS lesser scaup	.	.	2. 2	.	[ . . ]	.	2. 2	
AYTHYA AMERICANA redhead	2. 2	.	1. 1	1. 1	[ . . ]	.	2. 2	
AYTHYA COLLARIS ring-necked duck	.	.	2. 1	1. 0	[ . . ]	.	1. 1	
AYTHYA NYROCA common white-eye	2. 2	.	.	0. 1	[ . . ]	.	2. 1	
AYTHYA VALISINERIA canvasback	.	.	8. 8	.	[ . . ]	.	8. 8	
BUCEPHALA CLANGULA AMERICANA american common goldeneye	.	.	2. 2	2. 2	[ . . ]	2. 2	0. 0	
CAIRINA SCUTULATA white-winged wood duck	.	.	0. 2	0. 1	[ . . ]	.	0. 1	

2/1/89

Report Start Date:  
1 Jan 1989

Status of AVES Inventory  
MINNESOTA ZOOLOGICAL GARDEN

Page 3  
Report End Date:  
31 Dec 1989

Identification	Status	Other	Deaths	[ < 30 days ]		Other	Status	Grp
	01/01/89	Births	Acquis'n	Births	Acquis'n	Dispos'n	31/12/89	Cnt
MERGUS CUCULLATUS hooded merganser	0.1	.	.	0.1	[ . . ]	.	0.0	
MERGUS MERGANSER (no subsp) merganser	0.2	.	2.1	0.2	[ . 0.1 ]	.	2.1	
NETTA RUFINA red-crested pochard	2.1	.	.	2.1	[ . . ]	.	0.0	
OXYURA JAMAICENSIS (no subsp) ruddy duck	.	.	1.3	1.3	[ . 1.3 ]	.	0.0	
SARKIDIORNIS MELANOTOS MELANOTOS old world coab duck	1.2	.	.	.	[ . . ]	1.2	0.0	
FALCONIFORMES								
CATHARTIDAE								
VULTUR GRYPHUS andean condor	.	.	.	.	[ . . ]	.	0.0	
	+ 1.0		+ 1.0				+ 2.0	
ACCIPITRIDAE								
AQUILA CHRYSAETOS (no subsp) golden eagle	.	.	1.0	.	[ . . ]	.	1.0	
BUTEO JAMAICENSIS (no subsp) red-tailed hawk	3.1	.	.	.	[ . . ]	1.0	2.1	
GYPS AFRICANUS african white-backed vulture	0.0.1	.	.	.	[ . . ]	.	0.0.1	
PARABUTEO UNICINCTUS (no subsp) harris' hawk/bay-winged hawk	1.2	1.0	.	.	[ . . ]	.	2.2	
FALCONIDAE								
FALCO PEREGRINUS (no subsp) peregrine falcon	0.1	.	0.1	0.1	[ . . ]	.	0.1	
FALCO SPARVERIUS (no subsp) american kestrel/sparrowhawk	1.1	.	.	.	[ . . ]	.	1.1	
	- 0.0.2			- 0.0.2				
POLYBORUS PLANCUS CHERIWAY venezuelan caracara	0.1	.	.	.	[ . . ]	0.1	0.0	
GALLIFORMES								
PHASIANIDAE								
ARGUSIANUS ARGUS GRAYI bornean great argus	1.1	.	.	.	[ . . ]	.	0.0	
						- 1.1	- 1.1	
BAMBUSICOLA THORACICA bamboo partridge	1.3	2.0.4	.	0.0.4	[ 0.0.4 . ]	.	3.3	

1/2/89

Report Start Date:  
1 Jan 1989

Status of AVES Inventory  
MINNESOTA ZOOLOGICAL GARDEN

Page 4  
Report End Date:  
31 Dec 1989

Identification	Status		Other	Deaths	[ < 30 days ]		Other	Status	Grp
	01/01/89	Births	Acquis'n		Births	Acquis'n	Dispos'n	31/12/89	Cnt
CHRYSOLOPHUS AMHERSTIAE lady amherst's pheasant	1. 1	.	.	0. 1	[ .	.	] .	1. 0	
CHRYSOLOPHUS PICTUS golden pheasant	1. 1 + 0. 1	0. 0. 3 + 0. 0. 4	.	.	[ .	.	] .	1. 1. 3 + 0. 1	
COTURNIX CHINENSIS blue-breast button quail	1. 0	.	.	.	[ .	.	] .	1. 0	
FRANCOLINUS PINTADEANUS chinese francolin	4. 3. 1	.	.	1. 1	[ .	.	] 0. 1. 1	3. 1	
GALLOPERDIX SPADICEA red spur-fowl	4. 4. 2	1. 1. 1	.	0. 1	[ .	.	] 2. 2. 3	3. 2	
GALLUS DOMESTICUS chicken, domestic					[ .	.	] .	0. 0	18
<i>Group count 19.</i>									
POLYPLECTRON BICALCARATUM (no subsp) grey peacock pheasant	1. 2	0. 0. 1	.	.	[ .	.	] .	1. 2. 1	
ROLLULUS ROULROUL crested wood partridge	2. 1	2. 1. 2	1. 1	0. 0. 2	[ 0. 0. 2	.	] 3. 2	2. 1	
TRAGOPAN TEMMINCKII temminck's tragopan	1. 1	.	.	.	[ .	.	] .	1. 1	
GRUIFORMES									
TURNICIDAE									
TURNIX TANKI yellow-legged heaipode / quail	2. 0	.	.	2. 0	[ .	.	] .	0. 0	
GRUIDAE									
ANTHROPOIDES VIRGO demoiselle crane	2. 0	.	.	.	[ .	.	] .	2. 0	
GRUS ANTIGONE (no subsp) sarus crane	.	.	0. 0. 2	.	[ .	.	] .	0. 0. 2	
GRUS CANADENSIS (no subsp) sandhill crane	1. 0 + 0. 1	.	.	.	[ .	.	] .	1. 0	
RALLIDAE									
PORPHYRIO PORPHYRID (no subsp) grey-headed gallinule/purp.swamphen	1. 1. 3	0. 0. 12	.	0. 0. 1	[ .	.	] 0. 0. 4	1. 1. 10	
PORZANA CAROLINA sora	0. 0. 2	.	.	0. 0. 1	[ .	.	] .	0. 0. 1	

9/2/89

**Status of AVES Inventory**  
MINNESOTA ZOOLOGICAL GARDEN

Page 5

Report Start Date:  
1 Jan 1989

Report End Date:  
31 Dec 1989

Identification	Status	Other	Deaths	[ < 30 days ]	Other	Status	Grp
	01/01/89	Births	Acquis'n	Births	Acquis'n	Dispos'n	31/12/89 Cnt
<b>CARIAMIDAE</b>							
CARIAMA CRISTATA red-legged seriema	.	.	0.1	.	[ .	. ] .	0.1
CHUNGA BURMEISTERI black-legged seriema	0.0.1	.	.	.	[ .	. ] 0.0.1	0.0
<b>CHARADRIIFORMES</b>							
<b>CHARADRIIDAE</b>							
VANELLUS SPINOSUS spur-winged lapwing	4.2.4	0.0.3	.	1.0.4	[ 0.0.1	. ] .	3.2.3
<b>COLUMBIFORMES</b>							
<b>COLUMBIDAE</b>							
CALOENAS NICOBARICA (no subsp) nicobar pigeon	2.5 + 4.6	1.0.2 + 1.1	.	0.0.1	[ .	. ] .	3.5.1 + 5.7
CHALCOPHAPS INDICA (no subsp) green-winged dove	0.1	.	.	.	[ .	. ] .	0.1
COLUMBA LIVIA pigeon	0.0.70	.	.	0.0.5	[ .	. ] 0.0.10	0.0.55
DUCULA BICOLOR pied imperial pigeon	9.5	4.0	.	.	[ .	. ] .	13.5
GALLICOLUMBA LUZONICA bleeding heart pigeon	1.1	.	.	.	[ .	. ] .	1.1
GEOPELIA CUNEATA diamond dove	1.1	.	.	0.1	[ .	. ] .	1.0
GEOPELIA STRIATA zebra dove	1.0	.	.	.	[ .	. ] .	1.0
GOURA VICTORIA victoria crowned pigeon	1.1 - 1.1	.	.	.	[ .	. ] .	2.1 - 0.1
MACROPYGIA UNCHALL bar-tailed cuckoo-dove	1.1 - 1.0	.	.	.	[ .	. ] .	1.1 - 1.0
PTILINOPUS MELANOSPILA black-naped fruit dove	.	.	.	.	[ .	. ] .	0.0 + 1.1
ZENAIDA MACROURA mourning dove	1.2	.	.	.	[ .	. ] .	1.2
<b>PSITTACIFORMES</b>							
<b>LORIIDAE</b>							
EOS BORNEA (no subsp) red lory	1.0	.	.	.	[ .	. ] 1.0	0.0

2/3/12

Report Start Date:  
1 Jan 1989

Status of AVES Inventory  
MINNESOTA ZOOLOGICAL GARDEN

Page 6  
Report End Date:  
31 Dec 1989

Identification	Status	Births	Other Acquis'n	Deaths	[ < 30 days ]		Other Dispos'n	Status 31/12/89	Grp Cnt
	01/01/89				Births	Acquis'n			
TRICHOGLOSSUS GOLDIEI goldie's lorikeet	1. 1	0. 0. 2	.	0. 0. 2	[ 0. 0. 2	.	]	1. 1	
CACATUIDAE									
CACATUA SULPHUREA (no subsp) lesser sulphur-crested cockatoo	1. 0	.	.	.	[ .	.	]	1. 0	
CACATUA SULPHUREA SULPHUREA lesser sulphur-crested cockatoo	1. 0	.	.	.	[ .	.	]	1. 0	
NYMPHICUS HOLLANDICUS cockatiel	1. 0	.	.	.	[ .	.	]	1. 0	
PSITTACIDAE									
AMAZONA OCHROCEPHALA AUROPALLIATA yellow-naped amazon	1. 0. 3	.	0. 0. 1	.	[ .	.	]	1. 0. 4	
AMAZONA OCHROCEPHALA ORATRIX mexican double yellow-headed amazon	0. 0. 1	.	.	.	[ .	.	]	0. 0. 1	
AMAZONA OCHROCEPHALA PANAMENSIS panama yellow-crowned amazon	0. 0. 1	.	.	.	[ .	.	]	0. 0. 1	
ARA ARARAUNA blue-and-yellow macaw	0. 0. 1 - 1. 1	.	.	.	[ .	.	]	0. 0. 1 - 1. 1	
ARA CHLOROPTERA green-winged macaw	0. 0. 1	.	.	.	[ .	.	]	0. 0. 1	
ECLECTUS RORATUS SOLOMONENSIS solomon eclectus parrot	1. 1	.	.	.	[ .	.	]	1. 1	
PSITTACUS ERITHACUS (no subsp) grey parrot	1. 1. 2	.	.	.	[ .	.	]	1. 1. 2	
CUCULIFORMES									
CUCULIDAE									
CARPOCOCCYX RENAULDI renauld's ground cuckoo	1. 0 + 1. 1	0. 0. 1 + 2. 0	.	0. 0. 1	[ .	.	]	1. 0 + 3. 1	
GEOCOCCYX CALIFORNIANA roadrunner	0. 2	.	.	.	[ .	.	]	0. 2	
STRIGIFORMES									
STRIGIDAE									
AEGOLIUS ACADICUS sav-vhet owl	0. 0. 2	.	.	.	[ .	.	]	0. 0. 2	
BUBO VIRGINIANUS great horned owl	1. 1. 2	.	.	.	[ .	.	]	1. 1. 2	

2/1/12

Report Start Date:  
1 Jan 1989

Status of AVES Inventory  
MINNESOTA ZOOLOGICAL GARDEN

Page 7  
Report End Date:  
31 Dec 1989

Identification	Status	Other	Deaths	[ < 30 days ]		Other	Status	Grp
	01/01/89	Births	Acquis'n	Births	Acquis'n	Dispos'n	31/12/89	Cnt
OTUS ASIO common screech owl	1. 0. 1 - 0. 0. 1	.	.	0. 0. 1 - 0. 0. 1	[ . . ]	.	1. 0	
STRIX NEBULOSA great grey owl	0. 0. 2	.	.	.	[ . . ]	.	0. 0. 2	
CAPRIMULGIFORMES PODARGIDAE PODARGUS STRIGOIDES tawny frogmouth	1. 1	.	.	.	[ . . ]	.	1. 1	
CORACIIFORMES BUCEROTIDAE BUCEROS BICORNIS great hornbill	1. 1	.	.	.	[ . . ]	.	1. 1	
BUCORVUS ABYSSINICUS abyssinian ground hornbill	0. 0. 1	.	.	.	[ . . ]	.	0. 0. 1	
PICIFORMES CAPITONIDAE MEGALAIMA MYSTACOPHANOS gaudy red-throated barbet	3. 2	.	.	2. 0	[ . . ]	.	1. 2	
PSILOPOGON PYROLOPHUS fire-tufted barbet	1. 1	.	.	.	[ . . ]	.	1. 1	
RAMPHASTIDAE RAMPHASTOS TOCO (no subsp) toco toucan	1. 0. 1	.	.	.	[ . . ]	.	1. 0. 1	
PASSERIFORMES EURYLAIMIDAE CALYPTOMENA VIRIDIS lesser green broadbill	1. 1	.	.	.	[ . . ]	.	1. 1	
PITTIDAE PITTA SORDIDA hooded pitta	1. 0	.	.	.	[ . . ]	.	1. 0	
PYCNONOTIDAE PYCNONOTUS CAFER red-vented bulbul	0. 1. 1	.	.	.	[ . . ]	.	0. 1. 1	
IRENIDAE CHLOROPSIS AURIFRONS golden-fronted leafbird	2. 0	.	.	.	[ . . ]	.	2. 0	
CHLOROPSIS HARDWICKEI orange-bellied leafbird	1. 0	.	.	.	[ . . ]	.	1. 0	

4/8/3

Status of AVES Inventory

Report Start Date:  
1 Jan 1989

MINNESOTA ZOOLOGICAL GARDEN

Report End Date:  
31 Dec 1989

Identification	Status 01/01/89	Births	Other Acquis'n	Deaths	[ < 30 days ] Births	Acquis'n	Other Dispos'n	Status 31/12/89	Grp Cnt
IRENA PUELLA fairy bluebird	4.2	.	.	.	[ .	.	] 1.0	3.2	
BOMBYCILLIDAE									
BOMBYCILLA CEDRORUM cedar waxwing	0.0.5	.	.	.	[ .	.	] .	0.0.5	
MIMIDAE									
DUMETELLA CAROLINENSIS common catbird	1.0	.	.	.	[ .	.	] .	1.0	
MUSCICAPIDAE									
CATHARUS GUTTATUS hermit thrush	0.0.1	.	.	.	[ .	.	] .	0.0.1	
COPSYCHUS MALABARICUS common shama thrush	2.2	0.0.8	.	0.0.8	[ 0.0.7	.	] .	2.2	
COPSYCHUS SAULARIS magpie robin / dhyal thrush	1.1	.	.	0.1	[ .	.	] .	1.0	
SIALIA SIALIS eastern bluebird	0.1	.	0.0.1	.	[ .	.	] .	0.1.1	
GARRULAX LEUCOLOPHUS white-crested laughing thrush	1.1	.	1.1	.	[ .	.	] .	2.2	
GARRULAX MILNEI red-tailed laughing thrush	1.3	.	.	0.1	[ .	.	] .	1.2	
HETEROPHASIA CAPISTRATA sibia	2.1	.	.	.	[ .	.	] .	2.1	
LEIOTHRIX LUTEA red-billed leiothrix	1.2.18	0.0.5	.	0.1.10	[ 0.0.1	.	] 0.0.4	1.1.9	
PARADOXORNIS WEBBIANUS vinous-throated parrotbill	0.0.10	.	.	0.0.5	[ .	.	] .	0.0.5	
ZOSTEROPIDAE									
ZOSTEROPS ERYTHROPLEURA chestnut-flanked white-eye	0.0.4	.	.	0.0.2	[ .	.	] .	0.0.2	
EMBERIZIDAE									
PHEUCTICUS LUDOVICIANUS rose-breasted grosbeak	1.1	.	.	.	[ .	.	] .	1.1	
PARULIDAE									
DENDROICA PETECHIA (no subsp) yellow warbler	.	.	0.0.1	0.0.1	[ .	0.0.1	] .	0.0	

2/5/89

Report Start Date:  
1 Jan 1989

Status of AVES Inventory  
MINNESOTA ZOOLOGICAL GARDEN

Page 9  
Report End Date:  
31 Dec 1989

Identification	Status	Other	Deaths	[ < 30 days ]		Other	Status	Grp
	01/01/89	Births	Acquis'n	Births	Acquis'n	Dispos'n	31/12/89	Cnt
MNIOTILTA VARIA black-and-white warbler	0. 0. 1	.	.	[ .	. ]	.	0. 0. 1	
SEIURUS AUROCAPILLUS ovenbird	0. 0. 1	.	.	[ .	. ]	.	0. 0. 1	
ICTERIDAE								
ICTERUS GALBULA northern oriole	1. 1	.	.	[ .	. ]	.	1. 1	
ESTRILDIDAE								
AMANDAVA AMANDAVA red avadavit	1. 0	.	.	[ .	. ]	.	1. 0	
AMANDAVA FORMOSA green avadavit	1. 1. 3	.	.	1. 0. 2 [ .	. ]	.	0. 1. 1	
EMBLEMA GUTTATA diamond firetail finch	1. 1	.	.	[ .	. ]	.	1. 1	
ESTRILDA CAERULESCENS red-tailed lavender waxbill	0. 0. 2	.	.	0. 0. 1 [ .	. ]	.	0. 0. 1	
PYTILIA HYPOGRAMMICA red-faced waxbill/yellow-wng pytilia	1. 0	.	.	[ .	. ]	.	1. 0	
URAEGINTHUS ANGOLENSIS cordon-bleu	0. 1	.	.	0. 1 [ .	. ]	.	0. 0	
STURNIDAE								
AMPELICEPS CORONATUS golden-crested mynah	1. 2	0. 1. 4	.	0. 0. 2 [ 0. 0. 2	. ]	.	1. 3. 2	
APLONIS PANAYENSIS red-eyed / glossy starling	7. 8.14	1. 0. 2	.	0. 1. 3 [ .	. ]	1. 2. 7	7. 5. 6	
GRACULA RELIGIOSA hill mynah	0. 0. 2	.	.	[ .	. ]	.	0. 0. 2	
LEUCOPSAR ROTHSCILDI bali/rothschild's mynah	1. 1. 1 - 1. 1	0. 0. 2	.	0. 0. 2 [ 0. 0. 2	. ]	.	1. 1. 1 - 1. 1	
SCISSIROSTRUM DUBIUM grosbeak starling	7. 6	0. 0. 1	.	0. 1. 1 [ 0. 0. 1	. ]	2. 0	5. 5	
STURNUS BURMANNICUS vinous-breasted / jerdon's starling	2. 1	0. 0. 6	.	[ .	. ]	.	2. 1. 6	
ORIOOLIDAE								
ORIOULUS CHINENSIS black-naped oriole	2. 2	.	.	0. 1 [ .	. ]	.	2. 1	

6/2/89

Report Start Date:  
1 Jan 1989

Status of AVES Inventory  
MINNESOTA ZOOLOGICAL GARDEN

Page 10  
Report End Date:  
31 Dec 1989

Identification	Status		Other	Deaths	[ < 30 days ]		Other	Status	Grp
	01/01/89	Births	Acquis'n		Births	Acquis'n	Dispos'n	31/12/89	Cnt
CORVIDAE									
CORVUS BRACHYRHYNCHOS common crow	0. 0. 2	.	0. 0. 2	.	[ .	. ]	0. 0. 2	0. 0. 2	
CORVUS CORAX raven	.	.	0. 0. 1	.	[ .	. ]	0. 0. 1	0. 0	
CRYPHSIRINA TEMIA racket-tailed treepie	1. 0. 4	.	.	.	[ .	. ]	.	1. 0. 4	
CYANOCITTA CRISTATA blue jay	0. 0. 1	.	0. 0. 1	.	[ .	. ]	.	0. 0. 2	
URCICISSA ERYTHORHYNCHA blue magpie	1. 0	.	.	.	[ .	. ]	.	1. 0	

**Status of AVES Inventory**  
MINNESOTA ZOOLOGICAL GARDEN

Report Start Date:  
1 Jan 1989

Report End Date:  
31 Dec 1989

**Summary:**

	Specimens Owned at institution =====	Specimens Owned on Loan Out =====	Specimens Not Owned on Loan In =====
Status 1 Jan 1989	556	12	17
Births	113	0	8
Other Acquisitions	64	4	3
Deaths	138	3	1
[Deaths < 30 days [ of Birth            ]]	35	0	0
[Deaths < 30 days [ of Other Acq.    ]]	11	0	0
Other Dispositions	79	10	6
Status 31 Dec 1989	510	15	21

Total Specimens owned by MINNESOTA:

525

Non-Accessioned Group Counts:

18.00

21  
 510  
 + 18  
 -----  
 549

**Legend:**

- 1.1.1 = specimen counts as males.females.unknown sex
- 1.1.1 = specimens on Loan Out from MINNESOTA
- +1.1.1 = specimens on Loan In to MINNESOTA

<i>On site</i>	<i>Out on loan not also on site</i>
<i>10 - Orders</i>	<i>0 - Orders</i>
<i>33 - Families</i>	<i>0 - Families</i>
<i>120 - Species</i>	<i>1 - Species</i>
<i>549 - Specimens</i>	<i>2 - Specimens</i>

Status of MAMMALIA Inventory

Report Start Date:  
1 Jan 1989

MINNESOTA ZOOLOGICAL GARDEN

Report End Date:  
31 Dec 1989

Prepared 26 March 1990

Identification	Status	Other	Deaths	[ < 30 days ]	Other	Status	Grp
	01/01/89	Births	Acquis'n	Births	Acquis'n	Dispos'n	31/12/89
<b>MAMMALIA</b>							
<b>MARSUPIALIA</b>							
<b>DIDELPHIDAE</b>							
DIDELPHIS VIRGINIANA	1.2	.	.	1.0	[ . . ]	.	0.2
o possum							
<b>PHASCOLARCTIDAE</b>							
PHASCOLARCTOS CINEREUS VICTOR	.	.	.	.	[ . . ]	.	0.0
koala			+ 1.1				+ 1.1
<b>INSECTIVORA</b>							
<b>ERINACEIDAE</b>							
ERINACEUS EUROPAEUS	0.1	.	.	.	[ . . ]	.	0.1
european hedgehog							
<b>TUPAIIDAE</b>							
TUPAIA GLIS (no subsp)	1.1	.	.	.	[ . . ]	.	1.1
common tree shrew							
<b>CHIROPTERA</b>							
<b>PTEROPODIDAE</b>							
PTEROPUS GIGANTEUS	8.12	0.0.3	.	.	[ . . ]	3.0	5.12.3
indian flying fox							
<b>PHYLLOSTOMATIDAE</b>							
ARTIBEUS JAMAICENSIS	4.17	1.2	.	.	[ . . ]	.	5.19
big fruit bat	- 3.0			- 2.0			- 1.0
							<i>5.19 - 2.4 = 2.75 Non-A</i>
							<i>29</i>
							<i>big dip</i>
<b>PRIMATES</b>							
<b>LORISIDAE</b>							
NYCTICEBUS COUCANG (no subsp)	1.1	.	.	.	[ . . ]	.	1.1
slow loris	- 1.0	- 1.0					- 2.0
		+ 0.1	+ 1.1				+ 1.2
<b>CERCOPITHECIDAE</b>							
MACACA FUSCATA (no subsp)	17.19.2	5.2	.	12.2.1	[ 1.0 . ]	.	10.19.1
japanese macaque							
MACACA NIGRA (no subsp)	2.0	0.0.1	.	.	[ . . ]	2.0.1	0.0
black ape	+ 2.4	+ 0.1	+ 2.5			+ 4.10	
MACACA SILENUS	5.0	.	.	.	[ . . ]	.	5.0
lion-tailed macaque							
<b>PONGIDAE</b>							
HYLOBATES CONCOLOR LEUCOGENYS	1.3	.	.	.	[ . . ]	.	1.2
black gibbon	- 0.1					- 0.1	- 0.2
<b>EDENTATA</b>							
<b>DASYPODIDAE</b>							
EUPHRACTUS SEXCINCTUS	0.1	.	.	.	[ . . ]	.	0.1
six-banded armadillo							

5/19/11

Status of MAMMALIA Inventory

Report Start Date:  
1 Jan 1989

MINNESOTA ZOOLOGICAL GARDEN

Report End Date:  
31 Dec 1989

Identification	Status	Births	Other Acquis'n	Deaths	[ < 30 days ]		Other Dispos'n	Status 31/12/89	Grp Cnt
	01/01/89				Births	Acquis'n			
CANIS FAMILIARIS HALSTROMI singing dog	1. 1	.	.	.	[ . . ]	.	.	1. 1	
CANIS LATRANS (no subsp) coyote	2. 1	.	.	.	[ . . ]	.	.	2. 1	
CANIS LUPUS LYCAON grey wolf	2. 1	3. 4	.	.	[ . . ]	2. 2	.	3. 3	
UROCYON CINEREOARGENTEUS (no subsp) grey fox	1. 1	.	.	.	[ . . ]	.	.	1. 1	
URSIDAE									
MELURUS URSINUS (no subsp) sloth bear	1. 1 - 1. 0	.	.	.	[ . . ]	.	.	1. 1 - 1. 0	
PROCYONIDAE									
AILURUS FULGENS (no subsp) red panda	. + 1. 1	.	.	.	[ . . ]	.	.	0. 0 + 1. 1	
MUSTELIDAE									
GULO GULO (no subsp) wolverine	2. 0	.	.	.	[ . . ]	.	.	2. 0	
GULO GULO GULO wolverine	. + 0. 1	.	.	.	[ . . ]	.	+ 0. 1	0. 0	
MARTES PENNANTI (no subsp) fisher	1. 1	.	1. 2	.	[ . . ]	1. 1	.	1. 2	
MARTES PENNANTI PENNANTI fisher	1. 0	.	.	.	[ . . ]	.	.	1. 0	
MUSTELA ERMINEA BANGSI ermine	9. 7	1. 3. 2	.	3. 2. 2	[ 0. 0. 2 . ]	3. 6	.	4. 2	
MUSTELA FUTORIUS (no subsp) domestic ferret / european polecat	4. 1	.	1. 0	3. 0	[ . . ]	.	.	2. 1	
MEPHITIS MEPHITIS (no subsp) striped skunk	0. 2	.	.	.	[ . . ]	.	.	0. 2	
SPILOGALE PUTORIUS (no subsp) spotted skunk	2. 1	.	.	1. 1	[ . . ]	.	.	1. 0	
SPILOGALE PUTORIUS AMBARVALIS spotted skunk	.	.	2. 2	.	[ . . ]	.	.	2. 2	
AONYX CINEREA (no subsp) oriental small-clawed otter	3. 3 - 1. 0 + 0. 2	.	.	0. 1	[ . . ]	0. 1	.	3. 1 - 1. 0 + 1. 3	

0/3/13

Status of MAMMALIA Inventory

Report Start Date:  
1 Jan 1989

MINNESOTA ZOOLOGICAL GARDEN

Page 4  
Report End Date:  
31 Dec 1989

Identification	Status	Births	Other Acquis'n	Deaths	[ < 30 days ]		Other Dispos'n	Status 31/12/89	Grp Cnt
	01/01/89				Births	Acquis'n			
LUTRA CANADENSIS CANADENSIS north american river otter	3.2 - 0.1	2.2	.	.	[ . . ]	.	2.1	3.3	
VIVERRIDAE									
ARCTICTIS BINTURONG (no subsp) binturong	2.0	.	.	.	[ . . ]	.	.	2.0	
FELIDAE									
FELIS BENGALENSIS (no subsp) leopard cat	. - 1.0	.	.	.	[ . . ]	.	.	0.0 - 1.0	
FELIS CONCOLOR (no subsp) puma	.	1.2	.	.	[ . . ]	.	.	1.2	
FELIS CONCOLOR OREGONENSIS puma	0.1	.	.	.	[ . . ]	.	.	0.1	
FELIS CONCOLOR VANCOUVERENSIS puma	1.1	.	.	1.0	[ . . ]	.	.	0.1	
FELIS LYNX CANADENSIS canadian lynx	1.2 - 1.1	0.0.3	.	0.0.3	[ 0.0.3 . ]	.	.	1.2 - 1.1	
PANTHERA LEO (no subsp) lion	0.2 + 1.0	.	1.0	.	[ . . ]	.	.	1.2	
PANTHERA NEBULOSA (no subsp) clouded leopard	4.3	3.2	.	1.1	[ 1.1 . ]	.	.	6.4	
PANTHERA PARDUS (no subsp) leopard	1.1 + 0.1	.	.	.	[ . . ]	.	.	1.1 + 0.1	
PANTHERA TIGRIS (no subsp) tiger	. + 1.0	.	.	.	[ . . ]	.	.	0.0 + 1.0	
PANTHERA TIGRIS ALTAICA siberian tiger	7.2 - 0.1 + 0.3	.	0.3	.	[ . . ]	.	.	7.5 - 0.1 + 0.3	
PERISSODACTYLA									
EQUIDAE									
EQUUS ASINUS (no subsp) african wild ass/domestic donkey	1.0	.	.	.	[ . . ]	.	.	1.0	
EQUUS CABALLUS domestic horse	1.1	0.1	.	.	[ . . ]	.	.	1.2	
EQUUS PRZEWALSKII przewalski's / asian wild horse	5.7 - 2.1 + 8.5	.	.	1.0 - 1.0	[ . . ]	.	.	4.7 - 2.1 + 8.5	

1/3/11

Status of MAMMALIA Inventory

Report Start Date:  
1 Jan 1989

MINNESOTA ZOOLOGICAL GARDEN

Report End Date:  
31 Dec 1989

Identification	Status	Births	Other Acquis'n	Deaths	[ < 30 days ]		Other Dispos'n	Status 31/12/89	Grp Cnt
	01/01/89				Births	Acquis'n			
TAPIRIDAE									
TAPIRUS INDICUS	1.1	0.1	.	.	[ . . ]	.	.	1.2	
malayan tapir	- 0.1							- 0.1	
ARTIODACTYLA									
CAMELIDAE									
CAMELUS BACTRIANUS (no subsp)	2.7	1.4	.	0.1	[ 0.1 . ]	1.0		2.10	
bactrian camel									
LAMA GLAMA (no subsp)	1.1	.	.	.	[ . . ]	.		1.1	
llama			- 0.1				- 0.1		
TRAGULIDAE									
TRAGULUS NAPU (no subsp)	0.2	2.0	.	1.0	[ 1.0 . ]	.		1.2	
larger malayan chevrotain	- 1.0							- 1.0	
	+ 1.1		+ 1.1				+ 1.0	+ 1.2	
CERVIDAE									
MUNTIACUS REEVESI (no subsp)	1.1	.	.	.	[ . . ]	.		1.1	
reeves' muntjac									
CERVUS ELAPHUS CANADENSIS	2.6	1.2.1	.	0.2.1	[ 0.1.1 . ]	1.2		2.4	
american elk									
ALCES ALCES (no subsp)	2.1	0.1	.	2.0	[ . . ]	.		0.2	
moose									
ALCES ALCES ANDERSONI	.	.	1.0	.	[ . . ]	.		1.0	
moose									
RANGIFER TARANDUS (no subsp)	1.2	.	1.0	0.1	[ . . ]	.		2.1	
reindeer									
RANGIFER TARANDUS CARIBOU	3.5	2.1.1	.	1.0.1	[ 1.0.1 . ]	.		4.6	
american woodland caribou									
ANTILOCAPRIDAE									
ANTILOCAPRA AMERICANA (no subsp)	4.8.1	7.5	.	2.3	[ 2.0 . ]	6.3		3.7.1	
pronghorn									
BOVIDAE									
BISON BISON (no subsp)	1.5	2.1	1.0	1.0	[ . . ]	.		3.6	
american bison									
BOS MUTUS GRUNNIENS	0.1	.	.	.	[ . . ]	1.		0.0	
domestic yak						- 0.1		- 0.1	
CAPRA HIRCUS	0.6	12.6	0.6	2.2	[ 2.0 . ]	10.2		0.14	
domestic goat									

1/10/11

Status of MAMMALIA Inventory

Report Start Date:  
1 Jan 1989

MINNESOTA ZOOLOGICAL GARDEN

Page 6  
Report End Date:  
31 Dec 1989

Identification	Status	Births	Other Acquis'n	Deaths	[ < 30 days ]		Other Dispos'n	Status 31/12/89	Grp Cnt
	01/01/89				Births	Acquis'n			
HEMITRAGUS HYLOCRIUS	7.4	.	.	7.0	[ .	. ]	.	0.4	
nilgiri tahr	-3.2			-1.1				-2.1	
OVIBOS MOSCHATUS (no subsp)	3.9	4.2	.	4.0	[ 3.0	. ]	1.2	2.9	
musk ox									
OVIS ARIES	2.2	2.1	.	2.1	[ 1.1	. ]	2.0	0.2	
domestic sheep									

0/0/3

Status of MAMMALIA Inventory  
MINNESOTA ZOOLOGICAL GARDEN

Report Start Date:  
1 Jan 1989.

Report End Date:  
31 Dec 1989

Summary:

	Specimens Owned at institution	Specimens Owned on Loan Out	Specimens Not Owned on Loan In
	=====	=====	=====
Status 1 Jan 1989	353	24	32
Births	106	2	2
Other Acquisitions	30	1	18
Deaths	89	7	1
[Deaths < 30 days [ of Birth ]	24	0	0
[Deaths < 30 days [ of Other Acq. ]	0	0	0
Other Dispositions	56	5	16
Status 31 Dec 1989	340	23	31

Total Specimens owned by MINNESOTA:

363

Non-Accessioned Group Counts:

100  
- 36  
-----  
64

31  
340  
+ 64  
-----  
435

Legend:

- 1.1.1 = specimen counts as males.females.unknown sex
- 1.1.1 = specimens on Loan Out from MINNESOTA
- +1.1.1 = specimens on Loan In to MINNESOTA

<i>On site</i>	<i>Out on Loan not also on site</i>
10 - Orders	1 - Orders
29 - Families	2 - Families
59 - Species	4 - Species
435 - Specimens	5 - Specimens

Preliminary  
Status of FISH Inventory  
MINNESOTA ZOOLOGICAL GARDEN  
ON HAND 31 DEC, 1989

LATIN NAME	COMMON NAME	YEAR			CUR STA TUS				ID NUMBERS
		ACQ	DISP	<30 D	MAL	FEM	UNK	TRL	

0 \*\* ORDER

1 \* FAMILY

PARALICHTHYS CALIFORNICUS	CALIFORNIA HALIBUT	0	0	0	0	0	2	AD	D1524,
SCORPAENICHTHYS MARMORATUS	CABEZON <i>or Pacific Halibut</i> F = Cottidae	0	0	0	0	0	2	AD	D1522,
UMBRINA RONCADOR	YELLOWFIN CROAKER <i>or Sciaenidae</i>	0	0	0	0	0	1	AD	D1523,
UROLOPHUS HALLERI	ROUND STINGRAY <i>or Rajiformes F = Dasyatidae?</i>	0	0	0	2	0	0	AD	D1518,

\*\* ORDER RAJIFORMES

\* FAMILY RAJIDAE

RAJA RADIATA	THORNY SKATE	2	2	0	0	2	0	AD	D1464,
--------------	--------------	---	---	---	---	---	---	----	--------

\*\* ORDER SQUALIFORMES

\* FAMILY SCYLIORHINIDAE

SCYLIORHINUS RETIFER	CHAIN DOGFISH	0	0	0	0	2	0	AD	
----------------------	---------------	---	---	---	---	---	---	----	--

\*\* ORDER

\* FAMILY

ANTHIUS SP.	HAWAIIAN FANCY ANTHIAS	9	9	2	0	0	1	AD	D1493, D1502
-------------	------------------------	---	---	---	---	---	---	----	--------------

\*\* ORDER ANGUILLIFORMES

\* FAMILY MURAENIDAE

GYMNOTHORAX MORDAX	CALIFORNIA MORAY	0	0	0	0	0	1	AD	
--------------------	------------------	---	---	---	---	---	---	----	--

\*\* ORDER BERYCIFORMES

\* FAMILY HOLOCENTRIDAE

ADRIORYX DIADEMA	BARRED SQUIRREL	0	0	0	0	0	9	AD	
HOLOCENTRUS ASCENSIONIS	LONGJAW SQUIRREL FISH	0	0	0	0	0	1	AD	

\*\* ORDER CLUPEIFORMES

\* FAMILY ESOCIDAE

ESOX LUCIUS	NORTHERN PIKE	0	0	0	0	0	4	AD	
ESOX MASQUINONGY	MUSKELLUNGE	0	0	0	0	0	4	AD	

\* FAMILY SALMONIDAE

SALVELINUS FONTINALIS	BROOK TROUT	0	2	0	0	0	7	AD	
-----------------------	-------------	---	---	---	---	---	---	----	--

2, 4, 32

K =  
" 8

Status of FISH Inventory  
MINNESOTA ZOOLOGICAL GARDEN

LATIN NAME	COMMON NAME	----- YEAR -----			CUR STA TUS				ID NUMBERS
		ACC	DISP	<30 D	MAL	FEM	UNK	TRL	
** ORDER CYPRINIFORMES									
* FAMILY BAGRIDAE									
MYSTUS VITTATUS	PURPLE STRIPED CATFISH	0	2	0	0	0	10	AO	
* FAMILY CATOSTOMIDAE									
CATOSTOMUS CATOSTOMUS	LONGNOSE SUCKER	0	2	0	0	0	6	AO	D1474,
CATOSTOMUS COMMERSONI	WHITE SUCKER	1	0	0	0	0	4	AO	,D1499
* FAMILY CHARACIDAE									
CHEIRODON AXELRODI	CARDINAL TETRA	0	34	0	0	0	76	ZL	D1216, D1334, D1343, D1362, D1369, D1390, D1397, D1454
* FAMILY COBITIDAE									
BOTIA MACRACANTHA	CLOWN LOACH	0	0	0	0	0	7	AO	
* FAMILY CYPRINIDAE									
BARBODES SCHWANFELDI	TINFOIL BARB	0	0	0	0	0	2	AO	
CYPRINUS CARPIO	KOI / CARP	0	0	0	0	0	6	CZ	D1406,
DANIO MALABARICUS	GIANT DANIO	10	6	0	0	0	10	AO	
LABEO BICOLOR	RED-TAILED SHARK	0	1	0	0	0	3	AO	
PUNTIUS CONCHONIUS	ROSY BARB	25	4	4	0	0	21	AO	
RASBORA TRILINEATA	SCISSOR-TAILED RASBORA	0	8	0	0	0	1	AO	D928,
* FAMILY GASTEROPELECIDAE									
CARNEGIELLA STRIGATA	MARbled HATCHETFISH	0	20	0	0	0	11	ZL	D1256, D1370, D1456,
* FAMILY GYRINOCHEILIDA									
GYRINOCHEILUS AYMONIERI	CHINESE ALGAE EATER	0	2	0	0	0	4	AO	D921, D927, D1337,
* FAMILY HOMALOPTERIDAE									
EFALZEORHYNCHUS KALLOPTERUS	FLYING FOX (FISH)	5	0	0	0	0	5	AO	
* FAMILY PLOTOSIDAE									
PLOTOSUS ANGUILLARIS	SALTWATER CATFISH	7	1	0	0	0	6	AO	,D1503,

7, 9, 172

Status of FISH Inventory  
MINNESOTA ZOOLOGICAL GARDEN

LATIN NAME	COMMON NAME	----- YEAR -----			CUR STA TUS			ID NUMBERS
		ACQ	DISP	<30 D	MAL	FEM	UNK	
** ORDER GADIFORMES								
* FAMILY GADIDAE								
MICROGADUS TOMCOD	ATLANTIC TOMCOD	9	1	1	0	0	6	AD D1463, D1500,
POLLACHIUS VIRENS	POLLOCK	2	1	0	0	0	1	AD D1325, D1461,
** ORDER PERCIFORMES								
* FAMILY ACANTHURIDAE								
ACANTHURUS ACHILLES	ACHILLES TANG	0	0	0	0	0	1	AD
ACANTHURUS GLAUCOPAREIUS	POWDER-BROWN TANG	0	0	0	0	0	1	AD
ZEBRASOMA FLAVENSCENS	YELLOW TANG	0	0	0	0	0	1	AD
ZEBRASOMA VELIFERUM	SAILFIN TANG	0	0	0	0	0	2	AD
* FAMILY ANABANTIDAE								
OSPHERONEMUS GORAMY	GOURAMI	0	1	0	0	0	2	AD D980,
* FAMILY APOGONIDAE								
APOGON ORBICULARIS	ORBICULATE CARDINAL	0	0	0	0	0	8	AD
* FAMILY CENTRARCHIDAE								
AMBLOPLITES RUPESTRIS	ROCK BASS	3	5	0	0	0	3	AD D75, D1427, D1495,
LEPOMIS GIBBOSUS	PUMPKINSEED	0	0	0	0	0	5	AD , D1494
LEPOMIS MACROCHIRUS	BLUEGILL	11	3	0	0	0	15	AD D76, D147, D174, D1012, D1446, D1476,
MICROPTERUS DOLOMIEUI	SMALLMOUTH BASS	3	2	0	0	0	2	AD D74, D177, D1418, D1447, D1496,
MICROPTERUS SALMOIDES	LARGEMOUTH BASS	0	0	0	0	0	2	AD
POMOXIS NIGROMACULATUS	BLACK CRAPPIE	0	2	0	0	0	5	AD D62, D175, D1414, D1441,
* FAMILY CHAETODONTIDAE								
CENTROPYGE BISPINOSUS	CORAL BEAUTY	0	0	0	0	0	1	AD
CENTROPYGE FLAVISSIMUS	LEMONPEEL ANGELFISH	1	0	0	0	0	1	AD D1484,
CENTROPYGE POTTERI	POTTERS ANGEL	1	0	0	0	0	1	AD D1485,
CHAETODON AURIGA	AURIGA BUTTERFLY	1	0	0	0	0	2	AD , D1487,
CHAETODON LUNULA	RACCOON BUTTERFLY	0	0	0	0	0	1	AD
CHAETODON MULTICINCTUS	PEBBLED BUTTERFLY	1	0	0	0	0	1	AD D1489,
CHAETODONTOPLUS MESOLEUCUS	SINGAPORE ANGEL	0	0	0	0	0	1	AD
FARUFENEUS CHRYSEREDROS	RED GOATFISH	3	2	1	0	0	1	AD D1490,

♂, ♀, 63

Status of FISH Inventory  
MINNESOTA ZOOLOGICAL GARDEN

LATIN NAME	COMMON NAME	----- YEAR -----			CUR STA TUS				ID NUMBERS
		ACQ	DISP	<30 D	MAL	FEM	UNK	TRL	
* FAMILY CIRRHITIDAE									
CIRRHITICHTHYS ASPRINUS	SPOTTED HAWKFISH	1	0	0	0	0	1	AQ	D1491,
PARACIRRHITES ARCATUS	ARC EYE HAWKFISH	1	0	0	0	0	1	AQ	D1508,
PARACIRRHITES TYPEE	RED STRIPED HAWKFISH	1	0	0	0	0	1	AQ	D1503,
* FAMILY COTTIDAE									
HEMITRIPTERUS AMERICANUS	SEA RAVEN	2	2	1	0	0	3	AQ	D1348, D1396, D1501
MYOXOCEPHALUS SCORPIUS	SHORTHORN SCULPIN	0	0	0	0	0	2	AQ	
* FAMILY EMBIOTOCIDAE									
EMBIOTOCA LATERALIS	STRIPED PERCH	0	1	0	0	0	3	AQ	D257,
* FAMILY GOBIIDAE									
POGONOCULIUS ZEBRA	TIGER GOBY	1	1	0	0	0	0	AQ	D1507,
* FAMILY LABRIDAE									
BODIANUS AXILLARIS	CORAL HOG	0	0	0	0	0	1	AQ	
TAUTOGOLABRUS ADSPERSUS	CUNNER	0	0	0	0	0	1	AQ	
THALASSOMA LUTESCENS	BANANA WRASSE	0	0	0	0	0	1	AQ	
* FAMILY PERCIDAE									
PERCA FLAVESCENS	YELLOW PERCH	3	1	0	0	0	13	AQ	
STIZOSTEDION CANADENSE	SAUGER	6	0	0	0	0	9	AQ	D77, D1451, D1 478, D1497
STIZOSTEDION VITREUM	WALLEYE	0	1	0	0	0	5	AQ	D1417, D1443, D1448, D1452,
* FAMILY PLATACIDAE									
PLATAX ORBICULARIS	ORBICULATE BATFISH	0	0	0	0	0	1	AQ	
* FAMILY POMACENTRIDAE									
AMPHIPRION AKALLOPISOS	SKUNK-STRIPED ANEMONE FISH	0	0	0	0	0	2	AQ	D989,
AMPHIPRION PERIDERAION	FALSE SKUNK-STRIPED ANEMONE FISH	0	0	0	0	0	2	AQ	
AMPHIPRION SEBAE	SEBAE CLOWN	0	0	0	0	0	2	AQ	
EUPOMACENTRUS DIENCAEUS	DUSKY DAMSEL FISH	0	0	0	0	0	5	AQ	
* FAMILY SCARIDAE									
SCARUS GUACAMAIA	RAINBOW PARROTFISH	0	0	0	0	0	4	AQ	
* FAMILY SCIAENIDAE									
HAEMULON FLAVINEATUM	FRENCH GRUNT	0	2	0	0	0	3	AQ	D1373,

6, 8, 65

Status of FISH Inventory  
MINNESOTA ZOOLOGICAL GARDEN

LATIN NAME	COMMON NAME	----- YEAR -----			CUR STA TUS				ID NUMBERS
		ACQ	DISP	<30 D	MAL	FEM	UNK	TRL	
* FAMILY SERRANIDAE									
MORONE SAXATILIS	STRIPED BASS	0	0	0	0	0	1	AG	
PARALABRAX CLATHRATUS	KELP BASS	0	0	0	0	0	3	AG	
* FAMILY SIGANIDAE									
LO VULPINUS	FOXFACE	2	1	1	0	0	1	AG	D1466, D1511,
* FAMILY TRIGLIDAE									
PRIONOTUS CAROLINUS	COMMON SEA ROBIN	0	0	0	0	0	1	AG	
** ORDER PLEURONECTIFORMES									
* FAMILY PLEURONECTIDAE									
PSEUDOPLEURONECTES AMERICANUS	WINTER FLOUNDER	5	1	1	0	0	6	AG	D1405, D1462.
** ORDER SCORPAENIFORMES									
FAMILY SCORPAENIDAE									
PTEROIS VOLITANS	LIONFISH	0	0	0	0	0	1	AG	
SEBASTES CAURINUS	COPPER ROCKFISH	0	0	0	0	0	2	AG	
SEBASTES CHRYSOMELAS	BLACK AND YELLOW ROCKFISH	0	0	0	0	0	5	AG	
** ORDER TETRAODONTIFORMES									
* FAMILY TETRAODONTIDAE									
DIODON HYSTRIX	PORCUPINEFISH	1	0	0	0	0	1	AG	D1492,

6

*On hand at end of inventory*

*N.O. 21*

7

*12 - Orders*  
*38 - Families*  
*78 - Species*  
*359 - Specimens*

*Subtotals 2,4353*  
*Total 359*

Preliminary  
Status of INVERTEBRATE Inventory  
MINNESOTA ZOOLOGICAL GARDEN  
ON HAND 31 Dec. 1989

LATIN NAME	COMMON NAME	YEAR			CUR STA TUS			
		ACQ	DISP	<30 D	MAL	FEM	UNK	TRL
** ORDER SABELLIDA								
* FAMILY SABELLIDAE								
EUDISTYLIA POLYMORPHA	FEATHER DUSTER WORM	0	0	0	0	0	1	AO
** ORDER ARANEAE								
* FAMILY THERAPHOSIDAE								
BRACHYPEUNA SMITHI	ORANGE-KNEED TARANTULA	0	0	0	0	0	4	
** ORDER ORTHOPTERA								
* FAMILY BLATTIDAE								
GROMPHADORHINA FORTENTOSA	MADAGASCAR HISSING COCKROACH	0	1	0	4	5	0	ZL
** ORDER XIPHOSURA								
* FAMILY LIMULIDAE								
LIMULUS POLYPHEMUS	HORSESHOE CRAB	2	0	0	0	0	2	AO
** ORDER SCLERACTINIA								
* FAMILY								
ORDER SCLERACTINIA	CORALS	0	5	0	0	0	0	AO
** ORDER ACTINIARIA								
* FAMILY ACTINIIDAE								
ANTHOFLEURA ARTEMISIA	BROWN ANEMONE	0	0	0	0	0	4	AO
ANTHOFLEURA ELEGANTISSIMA	AGGREGATING ANEMONE	0	0	0	0	0	4	AO
ANTHOFLEURA XANTHOGRAMMICA	GREEN ANEMONE	0	0	0	0	0	5	AO
CRIBINOPSIS FERNALDI	CRIMSON ANEMONE	0	1	0	0	0	1	AO
EPIACTIS PROLIFERA	BROODING ANEMONE	0	0	0	0	0	4	AO
STOIACTIS GIGANTEA	BROWN CARPET ANEMONE	0	1	0	0	0	1	AO
TEALIA CRASSICORNIS	RED (STRAWBERRY) ANEMONE	0	0	0	0	0	0	
TEALIA LOFOTENSIS	BEADED ANEMONE / SEA ANEMONE	0	13	0	0	0	30	AOZL
* FAMILY CERIANTHIDAE								
PACHYCERIANTHUS TORREYI	ANTHOZOAN	0	0	0	0	0	2	AO
* FAMILY CORALLIMORPHIDAE								
CORYNACTIS CALIFORNICA	COLONIAL ANEMONE/ CORALLIMORFHARIAN	0	0	0	0	0	4	AO
* FAMILY METRIDIIIDAE								
METRIDIDIUM SENILE	FLUMOSE /WHITE /POWDER-PUFF ANEMONE	24	18	2	0	0	47	AOZL

4 5 109

Status of INVERTEBRATE Inventory  
MINNESOTA ZOOLOGICAL GARDEN

LATIN NAME	COMMON NAME	YEAR			CUR STA TUS			
		ACQ	DISP	<30 D	MAL	FEM	UNK	TAL
* FAMILY STOICHACTIDAE								
CONDYLACTIS PASSIFLORA	ATLANTIC PINK TIP ANEMONE	0	1	0	0	0	0	0 AQ
RADIANTHUS KOSEIRENSIS	LONG TENTACLE / PURPLE ANEMONE	0	1	0	0	0	2	2 AQ
RADIANTHUS RITTERI	RITTERI ANEMONE	2	2	0	0	0	0	0 AQ
RADIANTHUS SP.	PURPLE ANEMONE	0	0	0	0	0	0	
* FAMILY								
CERIANTHUS SP.	TUBE ANEMONE	0	0	0	0	0	0	
** ORDER THORACICA								
* FAMILY BALANIDAE								
BALANUS NUBILUS	GIANT BARNACLE / ACORN BARNACLE	0	0	0	0	0	4	4 AQ
** ORDER DECAPODA								
* FAMILY								
PAGURUS ACADIANUS	ACADIAN HERMIT CRAB	0	0	0	0	0	0	
* FAMILY CANCRIDAE								
CANCER PRODUCTUS	RED ROCKCRAB	0	0	0	0	0	0	
* FAMILY COENOBITIDAE								
COENOBITA CLYPEATUS	LAND HERMIT CRAB	0	3	0	0	0	1	1 ZL
* FAMILY HIPFOLYTIIDAE								
THOR SP.	CAMEL SHRIMP	3	0	0	0	0	3	3 AQ
* FAMILY LITHODIDAE								
LOPHOLITHODES MANDTII	PUGET SOUND KING CRAB	2	2	0	0	0	0	0 AQ
* FAMILY PAGURIDAE								
PAGURUS LONGICARPUS	MARINE HERMIT CRAB / (LAND?)	0	0	0	0	0	0	
* FAMILY STENOPODIDAE								
STENOPUS HISPIDUS	CORAL BANDED SHRIMP	1	0	0	0	0	1	1 AQ
* FAMILY CANCRIDAE								
CANCER MAGISTER	DUNGENESS CRAB	1	1	1	0	0	0	0 AQ

0 0 11

Status of INVERTEBRATE Inventory  
MINNESOTA ZOOLOGICAL GARDEN

LATIN NAME	COMMON NAME	YEAR			CUR STA TUS			
		ACQ	DISP	<30 D	MAL	FEM	UNK	TRL
** ORDER FORCIPULATIDA								
* FAMILY ASTERIIDAE								
ASTERIAS FORBESI	SEA STAR	0	4	0	0	0	12	AO
ASTERIAS VULGARIS	BOREAL ASTERIAS	0	3	0	0	0	3	AO
PISASTER GIGANTEUS	JEWEL SEA STAR	0	0	0	0	0	6	AO
PISASTER OCHRACEUS	COMMON SEA STAR	0	0	0	0	0	0	
PYCNOFODIA HELIANTHOIDES	SUNFLOWER STAR	0	1	0	0	0	2	AO
** ORDER SPINULOSIDA								
* FAMILY SOLASTERIDAE								
SOLASTER STIMPSOINI	STRIPED SUNSTAR	0	0	0	0	0	4	AO
** ORDER CIDAROIDA								
* FAMILY								
STRONGYOCENTROTUS PURPURATUS	PURPLE URCHIN	0	0	0	0	0	0	
* FAMILY CIDARIDAE								
EUCIDARIS TRIBULOIDES	SLATE PENCIL URCHIN	0	0	0	0	0	2	AO
HETEROCENTROTUS MAMMILLATUS	RED PENCIL URCHIN	0	0	0	0	0	1	AO
* FAMILY ECHINOMETRIDAE								
ECHINOMETRA MATHAEI	GREEN URCHIN	1	0	0	0	0	1	AO
* FAMILY PARASALENIIDAE								
PARASALENIA BONINENSIS	BLACK-SPINED URCHIN	4	0	0	0	0	4	AO
** ORDER DENDROCHIROTIDA								
? * FAMILY STICHOPODIDAE								
THYONELLA SP.	CUCUMBER	0	0	0	0	0	2	AO
* FAMILY SCLERODACTYLIDAE								
SCLERODACTYLA BRIAREUS	HAIRY CUCUMBER	0	3	0	0	0	3	AO
* FAMILY STICHOPODIDAE								
PARASTICHOPOUS CALIFORNICUS	GIANT RED CUCUMBER	0	0	0	0	0	4	AO
PARASTICHOPOUS PARVIMENSIS	SPINY SEA CUCUMBER	0	0	0	0	0	0	
** ORDER OPHIURIDA								
* FAMILY OPHIODERMATIDAE								
OPHIODERMA GUTTATUM	SPOTTED BRITTLE SEA STAR	0	0	0	0	0	1	AO
OPHIODERMA PANAMENSIS	BLACK BRITTLE SEA STAR	0	1	0	0	0	10	AO

55

x = 4  
y = 9

Status of INVERTEBRATE Inventory  
MINNESOTA ZOOLOGICAL GARDEN

LATIN NAME	COMMON NAME	YEAR			CUR STA TUS			
		ACQ	DISP	<30 D	MAL	FEM	UNK	TRL
* FAMILY OPHIOTHRICIDAE								
OPHIOTHRIX SPICULATA	BRITTLE SEA STAR	0	0	0	0	0	7	AO
** ORDER VALVATIDA								
* FAMILY ODONTASTERIDAE								
PATIRIA MINIATA	BAT SEA STAR	12	1	0	0	0	34	AOZL
** ORDER PTERIOIDEA								
* FAMILY OSTREIDAE								
CRASSOSTREA VIRGINICA	COMMON OYSTER	0	0	0	0	0	0	
** ORDER OCTOPODA								
* FAMILY OCTOPODIDAE								
OCTOPUS BIMACULOIDES	MUD FLAT OCTOPUS	1	1	0	1	0	0	AO
** ORDER CAENOGASTROPODA								
* FAMILY BUCCINIDAE								
BUSYCON CANALICULATUM	CHANNELED WHELK	0	0	0	0	0	0	
** ORDER MESOGASTROPODA								
* FAMILY CYPRAEIDAE								
CYPRAEA SP.	COWRIE	0	0	0	0	0	0	
CYPRAEA SPADICEA	CHESTNUT COWRIE	0	0	0	0	0	4	AO

x=3  
y=4

*On hand at end of inventory*

1 045

14 - Orders

5, 5, 220

26 - Families

37 - Species

230 - Specimens

**Record-keeping System for Animals Not Registered with ISIS**

Fish and Invertebrates accessions and dispositions are written in bound log books, just as for ISIS animals.

Most of our fish and invertebrates are entered in groups with one number for each species in a shipment. Data for them is then entered and maintained in dBase computer files. An in-house computer program allows us to accession and deaccession individuals from groups and keep a running inventory.

As with our ISIS animals, management and behavioral data for the Fish and Invertebrates is entered in another in-house dBase computer program and can be sorted and retrieved in several ways.

A paper record kept by the Aquarium Zoologist and the Zoolab Zoologist keeps a regular census on paper.

A few bird, mammal and reptile species are kept in groups where the individuals are not given accession numbers (Prairie dogs, fruit bats Artibeus jamaicensis, domestic chickens, leopard geckos. There are entered in A.R.K.S. under their group category.

MINNESOTA ZOOLOGICAL BOARD  
SUBJECT: ANIMAL ACQUISITION/DISPOSITION  
SIGNATURE \_\_\_\_\_

POLICY NO. II.G  
EFFECTIVE DATE: 4/22/83  
REVISION DATE: 3/17/88

## ANIMAL ACQUISITION/DISPOSITION POLICY

### Introduction

A logical and ethical policy for the acquisition and disposition of species and individual animals is essential for the modern zoo. Because acquisition/disposition (A/D) decisions are among the most important to the successful management of the Minnesota Zoological Garden's (MZG) animal collection, and because there are conflicting values and ethical perspectives regarding animals among our supporting public, it is essential that our policies be clearly stated. Without a clear institutional A/D policy, decisions may seem arbitrary and inconsistent.

There are three basic tenets that must be balanced in any A/D decision:

1. The interests of the individual animal, which focus on its humane treatment.
2. The interests of the species, which are usually expressed as conservation issues.
3. The interests of the MZG, which are defined in its mission statement and adopted long range plan.

The MZG A/D policy contains four parts. The first is a general listing of decision guidelines and constraints. The second is a specific list of acquisition requirements. The third is a list of specific disposition requirements. The fourth part describes procedures.

#### I. General Guidelines

- A. This policy applies to the acquisition and disposition of living animals, their parts and remains.
- B. The MZG will comply with all municipal, state, federal and international laws pertaining to the acquisition, transportation, maintenance, and disposition of animals.
- C. Planning must precede the acquisition, reproduction, and/or disposition of individual animals. Animal management plans should identify the purpose(s) the species will serve, how many individual animals will be maintained, how they will be housed and managed, demographic and genetic issues, breeding requirements, and detailed surplus plans for the short and long terms.

- D. When acquiring endangered species and/or species managed in a Species Survival Plan (SSP) of the American Association of Zoological Parks and Aquariums (AAZPA) the MZG accepts the responsibility to manage those individuals in the best interest of the species.
- E. The interests of individual animals are defined as humane treatment. Humane treatment is defined in part by laws, and more fully by the biological knowledge and experience of MZG professional staff. The MZG A/D policy fully respects the rights of individual animals to humane treatment. The MZG A/D policy supports the quality of an individual animal's life rather than longevity.
- F. The interests of the MZG are defined as the cost of maintaining animals, and the value of maintaining animals.

1. Costs are straightforward and quantifiable. They include:

- initial purchase price and transportation
- food and supplies
- exhibit support
- staff
- medical support
- administration.

2. Value is a more subjective interest, but extremely important. Aspects of value are:

- importance to conservation
- importance to exhibition and recreation
- importance to education
- importance to research
- importance to public relations
- importance to guest appeal
- trade or sale worth.

In cases where value is judged to be greater than cost, the interests of the MZG are served. Conversely, when value is judged to be less than cost, the interests of the MZG are not served.

## II. ACQUISITION

- A. Species selection must precede the acquisition of individual animals. Exhibit species are selected within all constraints of this policy, with additional consideration to the following:
1. Exhibit species must promote the mission statement of the MZG:  
"Strengthening the bond between people and the living earth."
  2. Exhibit species should meet aesthetic guidelines of being presentable to our guests:
    - in an environment that appears natural and real
    - in natural social groups

- in a manner that brings the guest into the animals' environment by eliminating apparent and obtrusive barriers
  - in a manner that is exciting and appealing to our guests
  - in a manner that maximizes their visibility to our guests.
3. MZG animal management resources should be able to:
- meet the species' needs for health, space and diet
  - promote reproductive requirements, where appropriate
  - promote conservation themes
  - promote a quality education program.
4. Exhibit species selection will be consistent with and maximize the larger thematic components of the MZG exhibit programs.
5. All high-profile species (those requiring extraordinary expenditures of time, space, and monetary resources; and those that are critically endangered) will meet at least three of the four following criteria:
- The species is in need of captive propagation; i.e., be part of a Species Survival Program (SSP) of the AAZPA, or other organized captive breeding programs.
  - MZG staff attempts to directly participate in field conservation programs for the remaining free-ranging populations, if any
  - There is a strong, organized education program that informs our guests about the specie's characteristics.
  - There is a thoughtful research program that focuses on captive reproductive and/or husbandry needs.
- B. Individual animal selection will meet all species selection requirements, and will be consistent with current animal management plans for the species involved.

### III. DISPOSITION

- A. Species disposition will be considered when:
- planning eliminates or redesigns existing facilities or thematic concepts
  - changes in legal status or professional standards reduce compliance of existing species programs with acquisition requirements.
- B. Individual animals may be designated as surplus when:
- they no longer serve the genetic or demographic needs of the species
  - programs change
  - they become superannuated
  - overcrowding and/or social pressures are evident
  - costs increase
  - they are suffering
  - they are diseased, crippled, disfigured, or pose an infectious disease threat to other animals
  - they should be removed for medical diagnosis.

C. Surplus animal disposition is accomplished by:

- sale
- trade
- loan
- donation
- release
- euthanasia.

D. Surplus animals will be sold, traded, lent, or donated to:

- zoological institutions including zoos, game farms, museums, nature centers, animal dealers, etc.
- research institutions including universities, hospitals, laboratories, etc.
- private individuals who have demonstrated the ability to provide proper care and have a legitimate need.

E. When several options for the disposition of surplus animals are available, the choice will be made following consideration of the acquisition guidelines; i.e., the interests of the species, the individual animal, and the MZG.

F. Maximum utilization shall be made of the remains of animals that die in the collection. Priority will be given to uses (e.g., pathology) which will enhance our ability to care for the species in captivity or the wild. Secondly, educational and research uses will be served.

IV. PROCEDURES

- A. The Animal Management Committee implements the MZG A/D policy for the General Director. The committee is comprised of, but not limited to, the General Director, Director of Biological Programs, Veterinarian, General Curator, Animal Management Curators, Conservation Biologist, and the Interpretive Programs Curator. Species acquisitions and dispositions that originate outside of this committee will be reviewed by the committee for recommendation to the General Director. Individual animal A/D issues typically are generated and resolved within the committee.
- B. Euthanasia may be performed under the independent direction of the Veterinarian for emergency humane reasons, consistent with state and federal laws, and following consultation with appropriate animal management staff.
- C. When the A/D committee recommends euthanasia of any animal and/or disposition of a high profile animal or species for reasons other than humane needs, the decision will be confirmed by the General Director prior to implementation.

BREEDING LOAN AGREEMENT

between

MINNESOTA ZOOLOGICAL GARDEN

and

^OENTER OTHER PARTY^O^C

WHEREAS, the Minnesota Zoological Garden (hereinafter called the ^OENTER MZG'S POSITION^O^C) is concerned with the preservation and propagation of certain animals; and

WHEREAS, ^OEnter other party^O^C (hereinafter called the ^OENTER OTHER PARTY'S POSITION^O^C) is concerned with the preservation and propagation of certain animals;

NOW THEREFORE, the parties hereto agree to the conditions set forth below concerning the loan of ^OEnter animals involved in transaction^O^C

1. The OWNER hereby loans to the RECIPIENT the above listed specimen(s) for the purpose of propagation. In the event the RECIPIENT wishes to exhibit the specimen and progeny to the public at its facilities, such exhibition must be consistent with the best care available at the RECIPIENT's institution, and with a view to protecting the breeding habits of said specimen.

2. The RECIPIENT agrees to provide necessary housing, food, and veterinary care for the specimen and progeny according to the highest acceptable standards prevailing at its institution. The OWNER agrees that in the event of disease, injury, or death of the specimen or progeny allocated to the OWNER pursuant to paragraph 5 herein, the RECIPIENT, and its agents and employees, will be free of all responsibility to the OWNER for such

affliction, in the absence of gross negligence.

3. The RECIPIENT agrees to furnish the OWNER with a complete report in case of death of, or injury to, the specimen or progeny allocated to the OWNER pursuant to paragraph 5 herein. At the option and expense of the OWNER, the RECIPIENT shall preserve intact all portions of the carcass for delivery to the OWNER.

4. The OWNER and its officers and employees shall not be responsible for any damage, loss, death, or injury occurring by reason of anything done or omitted to be done by the RECIPIENT under or in connection with the execution of this Agreement if such acts or omissions are not under the direct supervision and control of the OWNER.

5. The RECIPIENT will undertake its best efforts to breed the specimen with mates approved by the OWNER. Any viable young produced by such breeding and born either during the term of this Agreement, or within a period after termination of this Agreement equivalent to the normal gestation term of this particular species, will be divided as follows:

^OEnter terms of offspring distribution^O^C

6. This Agreement will remain in effect for the lifetime of the specimen. Both parties hereto reserve the right to terminate this Agreement unilaterally by giving the other party thirty (30) days prior written notice.

7. The transportation charges for shipping the specimen from the OWNER to the RECIPIENT will be borne by the RECIPIENT.

All transportation charges for shipping the specimen and progeny from the RECIPIENT back to the OWNER will be borne by the OWNER.

8. Neither this Agreement, nor any rights or privileges granted hereunder, shall be assigned without prior written consent by both parties hereto.

9. Any conflicts arising from implementation of this Agreement shall be resolved solely in the interest of the welfare of the named specimen and progeny as determined through joint consultation by the parties.

10. This Agreement may be amended or modified in writing by mutual consent of both parties hereto. Such amendments shall be incorporated into this Agreement as addenda.

MINNESOTA ZOOLOGICAL GARDEN

Approved as to form and execution this \_\_\_\_ day of \_\_\_\_\_, 19\_\_.

By \_\_\_\_\_ Title ^OEnter originator's title^O^C Date \_\_\_\_\_

ATTORNEY GENERAL  
State of Minnesota

By \_\_\_\_\_ ^OENTER OTHER PARTY^O^C  
ASSISTANT By \_\_\_\_\_  
ATTORNEY GENERAL Title \_\_\_\_\_  
Date \_\_\_\_\_

UTILIZATION OF EXOTIC WILDLIFE IN OFF-PREMISES SITUATIONS

DIRECTOR'S SIGNATURE:

*Kathryn Z. Roberts*

The Minnesota Zoo exists to strengthen the bond between people and the living earth.

Animals may be used in off-site programs for educational and promotional activities providing their use is of a nature beneficial to the zoo, the public, and wildlife in general and their use does not in any way compromise the health and welfare of the individual animals.

Only animals from the Interpretive Programs Department are used in off-site presentations. These include contact animals from Zoolab presented via the traveling ZooArk, an outreach program visiting schools, civic groups, fairs, etc. Birds from the World of Birds Show are presented off-site during short programs also. Exotic domestic animals from the Children's Zoo, e.g., reindeer and llama, represent the zoo primarily as a marketing tool.

The Minnesota Zoo does not present any exotic wild animals such as primates, lions or tigers, bears or wolves off the zoo site.

The animal ambassadors traveling off-site from the Minnesota Zoo are under the direction of paid staff. These animals have been selected because of their behavior.

Off-site presentations utilizing zoo animals are designed to generate an interest in attending the Minnesota Zoo (marketing) and a respect and awareness of the specific species in the animal kingdom (education). Great care is taken to insure that staff does not in any way encourage the keeping of exotic animals as pets. Animals are not presented in any way as to construe anthropomorphisms or lack of respect for the animal. A conservation awareness for the future of all wildlife species and their natural habitat is the underlying theme in all presentations.

**U.S. DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE**

**INSPECTION OF ANIMAL FACILITIES, SITES OR PREMISES**

1. LICENSE NO. OR REGISTRATION NO. 41-C-19 2. PAGE 1 of 1

3. TYPE ("X" one)  
 EXHIBITOR     LICENSED DEALER     HOLDING FACILITY  
 REGISTERED RESEARCH FACILITY     REGISTERED RESEARCH SITE  
 OTHER (Specify) Inspection

4. DATE OF THIS INSPECTION 6/9/89 5. TIME 0900

6. DATE OF LAST INSPECTION 6/7/88 7. TIME 0900

8. NAME AND MAILING ADDRESS OF RESEARCH FACILITY, SITE, ZOO, CIRCUS, DEALER OR OTHER  
Minnesota Zoological Gardens  
12101 Johnny Cake Ridge Road  
Apple Valley, MN 55124

9. LOCATION OR ADDRESS OF PREMISES AT TIME OF THIS INSPECTION (If different from Item 8)  
(same)

10. NAME AND ADDRESS OF VETERINARIAN FOR FACILITY, SITE OR PREMISE  
Dr. Patino / O. Wolf  
12101 Johnny Cake Ridge Road  
Apple Valley, MN 55124

11. HAS A PROGRAM OF VETERINARY MEDICAL CARE AND EUTHANASIA BEEN PLANNED WITH REGISTRANT'S OR LICENSEE'S CONSULTING VETERINARIAN, AND WRITTEN PLANS SUBMITTED TO THE USDA VETERINARIAN IN CHARGE?  
 Yes     No (If "NO", give reason)

12. NO. DOGS AND CATS LISTED ON VS FORM 18-5 THIS DATE

DOGS	CATS	PRIMATES	GUINEA PIGS	HAMSTERS	RABBITS	BIRDS	CAPTIVE WILD ANIMALS (Specify)
A	B	C	D	E	F	G	H I J K L M N O P
		59	9		10	2	

13. NO. ANIMALS INSPECTED THIS DATE

							325
--	--	--	--	--	--	--	-----

STANDARDS - "X" if adequate; CIRCLE if deficient (explain in Item 49); NA if not applicable. NS if not seen

FACILITIES	GENERAL	INDOOR	OUTDOOR	PRIMARY ENCLOSURES	ANIMAL HEALTH AND HUSBANDRY	TRANSPORTATION	COMPLIANCE WITH REGULATIONS		EXPLAIN IF "NO."
							YES	NO	
14. Structural Strength	3.1	3.1	X	X	3.25	X	X	3.701	
15. Water and electric power	3.1	3.1	X	X	3.25	X	X	3.702	
16. Storage of food & bedding	3.1	3.1	X	X	3.25	X	X	3.703	
17. Waste Disposal	3.1	3.1	X	X	3.25	X	X	3.704	
18. Washrooms and sinks	3.1	3.1	X	X	3.25	X	X	3.705	
19. Heating and temperature	3.2	3.2	X	X	3.26	X	X	3.126	
20. Ventilation	3.2	3.2	X	X	3.26	X	X	3.127	
21. Lighting	3.2	3.2	X	X	3.26	X	X	3.128	
22. Interior surfaces	3.2	3.2	X	X	3.26	X	X	3.129	
23. Drainage	3.2	3.2	X	X	3.26	X	X	3.130	
24. Shelter from sunlight	3.3	3.3	X	X	3.27	X	X	3.131	
25. Shelter from rain or snow	3.3	3.3	X	X	3.27	X	X	3.132	
26. Shelter from cold weather	3.3	3.3	X	X	3.27	X	X	3.133	
27. Drainage	3.3	3.3	X	X	3.27	X	X	3.134	
28. General requirements	3.4	3.4	X	X	3.28	X	X	3.135	
29. Protection from predators	3.4	3.4	X	X	3.28	X	X	3.136	
30. Additional requirements		3.4			3.28	X	X	3.137	
31. Space requirements	3.4	3.4	X	X	3.28	X	X	3.138	
32. Feeding	3.5	3.5	X	X	3.29	X	X	3.139	
33. Watering	3.6	3.6	X	X	3.30	X	X	3.140	
34. Sanitation	3.7	3.7	X	X	3.31	X	X	3.141	
35. Cleaning	3.7	3.7	X	X	3.31	X	X	3.142	
36. Housekeeping	3.7	3.7	X	X	3.31	X	X	3.143	
37. Pest Control	3.7	3.7	X	X	3.31	X	X	3.144	
38. Employees	3.8	3.8	X	X	3.32	X	X	3.145	
39. Classification & Separation	3.9	3.9	X	X	3.33	X	X	3.146	
40. Veterinary Care	3.10	3.10	X	X	3.34	X	X	3.147	
41. Handling			NS	NS	NS	X	X	3.148	not handled this date
42. Vehicles	3.13	3.13	NS	NS	3.37	NS	NS	3.149	none in transit
43. Transport Enclosures	3.12	3.12	X	X	3.36	X	NS	3.150	
44. Food and Water	3.14	3.14	NS	NS	3.38	NS	NS	3.151	none in transit
45. Care in transit	3.15	3.15	NS	NS	3.39	NS	NS	3.152	none in transit

46. Is identification of animals being conducted in compliance with Section 2.50 of the regulations? NA

47. Are records being kept in the manner prescribed in Sections 2.75 and 2.76 of the regulations? NA

48. Are dogs and cats being held the number of days required in Section 2.101 of the regulations? NA





United States  
Department of  
Agriculture

Animal and  
Plant Health  
Inspection  
Service

Regulatory  
Enforcement  
and Animal  
Care

Animal Care  
Butler Square, Room 625  
100 North Sixth Street  
Minneapolis, MN 55403

May 20, 1989

Dear Licensed Commercial Dealer:

Veterinary Services, USDA, APHIS has been responsible for inspecting your facilities and maintaining your license for nearly a quarter of a century. However, Veterinary Services recently reorganized into several functional departments. Regulatory Enforcement and Animal Care (REAC) is now responsible for inspecting your facility and maintaining your license. We believe the reorganization will provide improved service to you and save your tax dollars.

In the past you have corresponded with Dr. Donald Person, the Minnesota Area Veterinarian in Charge located in St. Paul. However, as a result of the reorganization, your records have been transferred to the North Central Sector Office in Minneapolis. Now you will be corresponding with REAC regarding your Animal Welfare license and inspection requirement.

Dr. Ellen Magid, formerly with Veterinary Services in Minnesota, is assigned to perform Animal Welfare inspections in your area. Although she would like to make an appointment to inspect your facility, we are mandated by Congress to make an "unannounced inspection." She is required to perform these inspections Mondays through Fridays between the hours of 7 AM and 7 PM. According to Federal Regulations, you must provide access to your facility for the purpose of inspecting your animal records, your animals, and your animal facility. Failure to do so is a violation of the Code of Federal Regulation (9 CFR 2.126). Therefore, if you are employed elsewhere, during the day, or cannot always be present during normal business hours, please complete the "Hours of Inspection" form on the back of this notice and return it to the Sector Office at your earliest convenience.

We look forward to continuing the excellent working relationship Veterinary Services has enjoyed while working with you.

Franklin H. Kriewaldt  
Supervisor, Animal Care  
North Central Sector



APHIS-Protecting American Agriculture

USDA, APHIS, REAC, Animal Care  
Butler Square, Room 625  
100 North Sixth Street  
Minneapolis, MN 55403  
Tel. (612) 370-2255

HOURS FOR INSPECTION

I, as the licensee, will make my place of business, animals, and records available for inspection by an authorized representative of the USDA, Regulatory Enforcement and Animal Care during the following business hours (daylight hours):

PLEASE INDICATE EACH DAY OF THE WEEK THE ACTUAL HOURS (minimum of 4 hours daily) YOU WILL BE AVAILABLE FOR AN UNANNOUNCED INSPECTION.

MONDAY: \_\_\_\_\_

TUESDAY: \_\_\_\_\_

WEDNESDAY: \_\_\_\_\_

THURSDAY: \_\_\_\_\_

FRIDAY: \_\_\_\_\_

In my absence, I designate \_\_\_\_\_  
(NAME)

\_\_\_\_\_  
(ADDRESS) (PHONE NUMBER)

to be on the premises to accompany the USDA Inspector during the inspection of my facility. I further certify that either my designated representative or myself will be available at this facility during the hours listed above.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

USDA License #: \_\_\_\_\_





#### 41. USE OF M99, M50-50

There is no provision for administering M99, M50-50 or other controlled drugs without the presence of a licensed veterinarian. A veterinarian is on-site 7 days a week.

The controlled drugs are stored in a safe behind the locked doors of a pharmacy. Only the veterinarians and the lab technicians know the combination to the safe. Anti-dotes are carried at all times.

The Minnesota Zoo has regimes available for all animals that do not involve controlled substances for use if a licensed veterinarian is not present.

#### 42. SSP INVOLVEMENT

The Minnesota Zoo is an active participant in the following SSP's:

Asian lion

Asian small-clawed otter

Asian wild horse

Bali mynah

Red panda

Siberian tiger

Clouded leopard

In addition, Zoo staff is actively participating in the Gibbon Advisory Group, seeking formal SSP status for gibbons.

March 22, 1990



**The Minnesota Zoo**

Dear :

The Gibbon Advisory Group will meet at the Minnesota Zoo for two days, 5-6 April 1990. With this letter is an agenda we can use as a road map to move through the various steps that are necessary before we are in a position to petition the WCMC for a gibbon SSP. We appreciate the comments all of you submitted. The agenda is sufficiently flexible to include additional items that anyone may have at the time of the meeting. Accompanying the agenda are a number of supporting or relevant documents for our consideration. At the meeting we will distribute additional material relating to population viability analyses. Providing we can make some hard decisions on the critical issues, we probably have sufficient documentation to initiate the process to form a Gibbon SSP.

Tom Foose from the AAZPA's Conservation Office was unexpectedly scheduled to travel to Africa during this meeting and will therefore not be available. Ulie Seal from the IUCN/CBSG office will be available, but will be suffering from jet lag. With only a few exceptions, everyone intends to attend the workshop so we will have a critical mass for decision making. Let us know what hotel you intend to register at so we can arrange for pickup on Thursday morning. We look forward to seeing you here in Minnesota. We are going to work hard with the local weather bureau and request several non-blizzard days while you are all here.

Sincerely,

Ronald L. Tilson, Ph.D.  
Director of Conservation

Katherine Castle  
Curator/Tropics

RLT:cs

Enclosure

c: D. Bruning  
T. Foose  
U. Seal  
C. Wenner  
M. Stevenson  
J. Lernould  
K. Roberts

Strengthening The Bond Between People and The Living Earth.

Minnesota Zoo • Apple Valley, Minnesota • 55124 • 612/431-9200

GIBBON ADVISORY GROUP WORKSHOP  
MINNESOTA ZOO - CONSERVATION LIBRARY  
5-6 APRIL 1990

Thursday, April 5: AGENDA

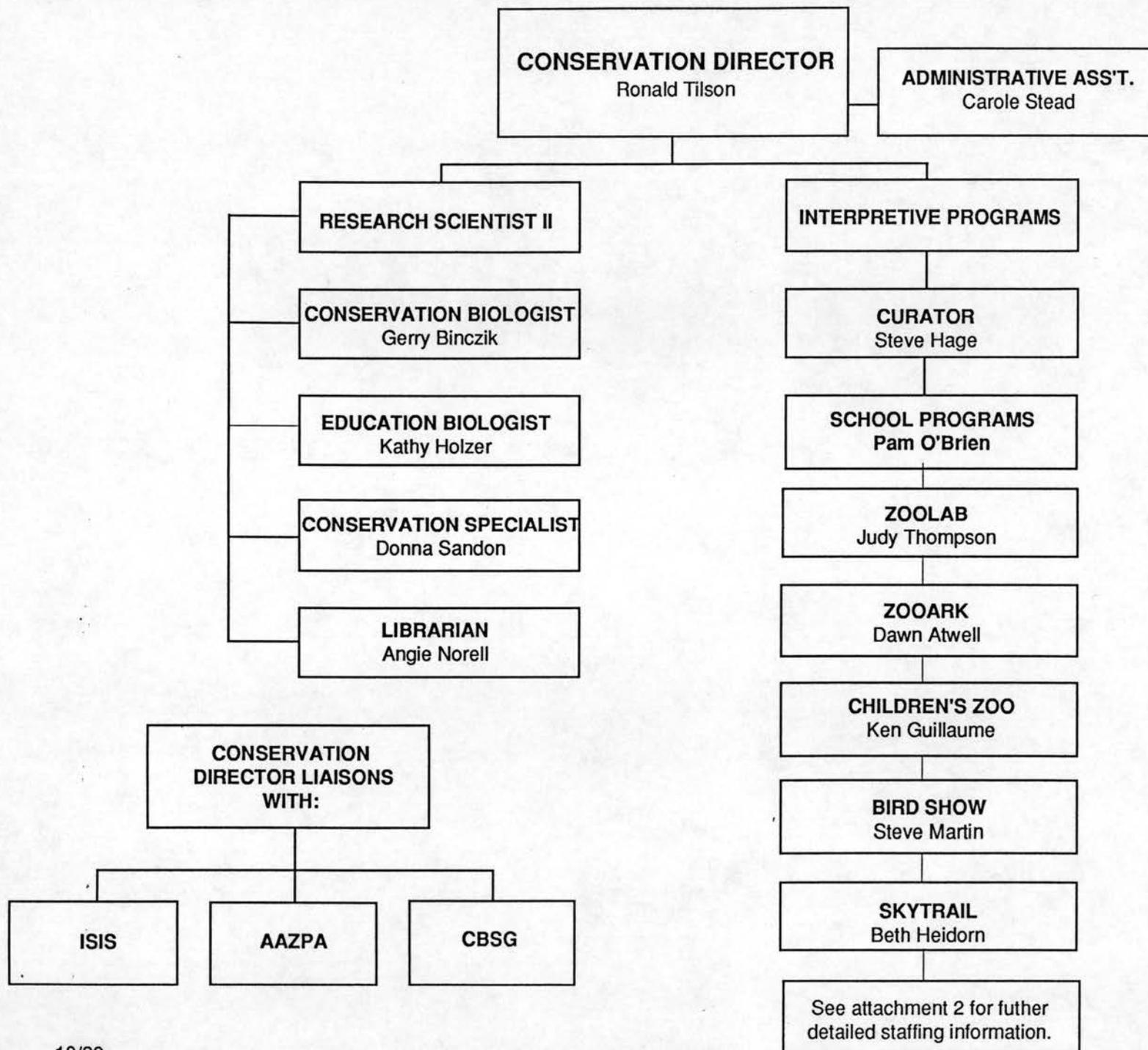
- 8:30 a.m. Pick up at respective hotels
- 9:00 Opening comments, introductions and objectives (R. Tilson)
- 9:10 Background of gibbon distribution, status and biology (R. Tilson)
- 9:40 Background of captive gibbons and zoo carrying capacity (K. Castle)
- 10:00 SSP goals/population viability analysis (U. Seal)
- 11:00 Break
- 11:15 PVA/continue discussion (Group)
- 12:00 LUNCH
- 1:00 p.m. Group discussion of issues
- \*Subspecies: Kinds? Numbers? Evidence?
  - \*Reproductive control of excess gibbons
  - \*Regional studbook keeper
  - \*In situ conservation programs: Thailand, Indonesia
  - \*Steps from GAG to SSP
  - \*Other issues
- 4:00 Gibbon song contest
- 4:15 Adjourn

Friday, April 6, 1990

- 9:00 a.m. Convene, Conservation Library
- Continue discussion of unresolved issues
- 10:00 FORMAL RECOMMENDATIONS BY GAG
- \*Nominations for Studbook Keeper
  - \*Nominations for SSP Committee
  - \*What species does GAG recommend to expand? to contain?
  - \*Does GAG recognize subspecies now?
  - \*What technology for reproductive control does GAG recommend?
  - \*Other recommendations, as appropriate
- 11:30 Gibbon slide show (bring your best slides)
- 12:00 LUNCH
- 1:00 p.m. Initiate process for institution-by-institution recommendations

#### 43. CONSERVATION

Cooperative conservation education programs include: membership in the International Zoo Educators association; Earth Days and Conservation Day at the Zoo involving speakers and booth representation from 25 to 50 conservation organizations; World Wildlife Fund, U.S.A.; local NonGame Wildlife programs from the Minnesota Department of Natural Resources.



## **Conservation Policy of the Minnesota Zoo**

The Minnesota Zoo's stated mission is to "Strengthen the Bond Between People and the Living Earth." We acknowledge a responsibility to provide leadership in conserving the biological diversity of our planet and in protecting the wild species living under our stewardship.

Three cornerstones of the Minnesota Zoo's conservation policy --PRESERVATION, RECREATION, and EDUCATION -- are of equal weight and significance to our mission.

CONSERVATION is the management of the biosphere so that it may yield the greatest sustainable benefit to present and future generations of all living organisms. Conservation should be viewed as a framework in which environmental life-sustaining systems are managed in accordance with ecological principles to assure an indefinite existence of the systems and hence, the levels of life they support. To fulfill the Zoo's mission in conservation, we use the science of ecology and expand to include the aesthetic value of nature and the notion that humankind has an ethical responsibility to protect all life on earth.

Conservation at the Minnesota Zoo will foster an awareness of the intrinsic beauty of all life. Our environmental interactions will reflect respect, even reverence, for our living planet, so that we commit ourselves to protect all forms of life. This will be accomplished by showing individuals concrete actions they can take for conservation, making sure the message is positive and sharing what the Minnesota Zoo is doing for conservation. The Zoo must lead by example.

The Zoo's action-plan for conservation will include:

### **Conservation through PRESERVATION**

Habitat loss is a major cause of diminishing plant and animal numbers and species extinctions. The Minnesota Zoo will help protect the remaining habitat to the extent possible with available and appropriate resources.

As a Zoo we support the International Union for Conservation of Nature and Natural Resources (IUCN) policy statement for Captive Breeding -- "Habitat protection alone is not sufficient if the expressed goal of the World Conservation Strategy, the maintenance of biotic diversity, is to be achieved. Establishment of self-sustaining captive populations and other supportive intervention will be needed to avoid the loss of many species, especially those at high risk in greatly reduced, highly fragmented, and disturbed habitats. Captive breeding programs need to be established before species are reduced to critically low numbers, and thereafter need to be coordinated internationally according to sound biological principles, with a view to the maintaining or re-establishment of viable populations in the wild."

### **Conservation through EDUCATION**

The Minnesota Zoo is an educational institution that is committed to teaching our visitors about the relationships between humankind and the natural world. Education will expand the public's awareness of historical, current and future environmental issues; will teach our visitors the value of a specie's rights to occupy this living earth; and will suggest to our visitors how they personally can effect a change by becoming involved with a conservation program of their choice.

### **Conservation through RECREATION**

We support a RE-CREATION or rejuvenation of our visitors by the quality of their experience at the Minnesota Zoo. Through aesthetically rewarding displays of plants and animals we elevate the importance of each species to each of our visitors and thus strengthen the efforts of society to better preserve and conserve our living earth. Recreation will be structured so that the Zoo experience is a fun, exciting and creative process that strengthens the bond between people and the living earth.

**GUIDING PRINCIPLES FOR CONSERVATION PROGRAM DEVELOPMENT**

**FOR ENDANGERED SPECIES THE MINNESOTA ZOO WILL:**

- provide leadership, where possible, in worldwide endangered species programs.
- continue to support the preservation and restoration of endangered species' natural habitats.
- explore appropriate ventures that will further global conservation.
- work with conservation organizations worldwide involved with endangered species and biological diversity programs.
- share with visitors the status of global conservation and endangered species, what the zoo and other organizations are doing about it, and how individual visitors can help.

**FOR HABITAT PRESERVATION THE MINNESOTA ZOO WILL:**

- recognize the central role people play in habitat preservation and strive to convince visitors that individual actions can make a difference.
- strive toward giving visitors a global understanding of how habitat preservation works.
- strive to have our actions complement efforts of other conservation groups.
- become involved in habitat protection over a continuum of activities and programs.
- develop a process to share conservation successes with our visitors.
- become viewed as a local environmental model that promotes biological diversity, recognizes and makes optimum use of the Zoo's habitat types, and offers programs of conservation involvement for our visitors.

**FOR ENVIRONMENTAL STEWARDSHIP THE MINNESOTA ZOO WILL:**

- develop liaison programs with other environmental groups involved in land stewardship and to seek partnership programs with these organizations.
- develop programs that will demonstrate to visitors how to be more environmentally responsible and make visitors aware of what the Zoo is doing.
- develop exhibits devoted to environmental stewardship issues, including population growth, habitat destruction and environmental pollution (ozone depletion, global warming, and acid rain, etc.).
- to evaluate (new) exhibits relative to environmental "ethics."
- ensure that (where possible) exhibits will carry an appropriate environmental "ethic" that is balanced relative to negative/positive messages.

# TIGER BEAT

The Newsletter of  
the Tiger Species Survival Plan

Vol. 2 No. 1

January, 1989

 Minnesota Zoo



## PROSPECTS FOR THE SOUTH CHINA TIGER

I had the good fortune in October 1988 to visit Hangzhou, China (as Chairman of the IUCN Captive Breeding Specialist Group and at the invitation of WWF) to participate in a meeting of Chinese zoo officials and scientists with representatives of the AAZPA and the British Federation to discuss matters of mutual interest and concern. There were presentations by all groups on current work with the giant panda. Professor Tan Banji made a very articulate and careful analysis of the status of the South China tiger (*Panthera tigris amoyensis*) in the wild and in captivity. He and all of the Chinese who commented are very concerned for the future of this subspecies. They regard it as a national treasure and want collaboration in an effort to support its survival.

Professor Tan noted that the wild habitat is fragmented into small patches, there is a continuing expansion of the human population, and that free ranging animals are coming into contact with people more frequently. He indicated that 20 hectares of land have been provided to the Chongqing Zoo for a tiger breeding program and that they are eager to establish a program. Xiang Peilun (who was at the meeting) of the Chongqing zoo has responsibility for establishing the studbook for this subspecies. I was invited to visit Chongqing, after the Hangzhou meeting, to discuss the program with them but I reluctantly had to decline.

The number of animals remaining in the wild is unknown. Speculations suggest 30-50 animals but no field work has been done. The IUCN Cat Specialist Group has proposed sending an experienced tiger field worker there in the summer of 1989 to make a survey. This needs to be done to provide a basis for establishing protected areas, and to allow a population viability analysis with recommendations for a management program including the use of captive breeding. Comments by the Chinese scientists indicate that the primary hope for the South China tiger will be in a vigorous captive breeding program.

A tally of the numbers of South China tigers in Chinese zoos shows 32 animals regarded as pure in 10 zoos. Four hybrids are noted in three zoos. There are none known in zoos outside of China. Three zoos - Chongqing, Gulyang, and Shanghai - hold 17 of these tigers. Our latest studbook information is recorded in the 1986 International Tiger Studbook. I used this information for a pedigree analysis of the captive population.

*This newsletter is published by the Minnesota Zoological Garden as a service to the AAZPA Tiger SSP and to the conservators of captive and wild tigers worldwide. Participation by the readership is invited. Please direct all questions, comments and materials for submission to:*

G. Allen Blenczik/Ronald L. Tilson  
Editors • Tiger Beat  
Minnesota Zoological Garden  
12101 Johnny Cake Ridge Road  
Apple Valley, MN 55124

There is a need for management of the breeding program to include unrepresented founders. It is also desirable to acquire additional founder stock if possible. To establish a program it will be necessary to estimate holding capacity for tigers in Chinese zoos. My guess is that there are 150+tigers in

Prospects for the South China Tiger - continued...

Chinese zoos, many of which are of unknown or mixed parentage. Zoos hold animals of the Siberian (*P.t. altaica*) and Bengal (*P.t. tigris*) subspecies as well.

Table 1.  
Summary of Founder Retention in Population.

Number of potential founders:	9
Number of founders:	8
Parity (%):	12.5000
Mean retention:	0.6506
Mean heterozygosity:	0.7775
Number of effective founders:	2.8978

A program for the South China tiger could proceed by a systematic replacement of the tigers of uncertain parentage in Chinese zoos with pure South China tigers as this population is expanded in a controlled breeding program. This approach has the merits of using already available resources, not requiring an elaborate breeding center program, and not needing foreign participation for the survival of the subspecies. Our primary contribution would be in providing information on population biology and perhaps on some elements of tiger husbandry.

Also needed is an assessment of the remaining habitat including prey base, its likely retention in protected areas, and the tiger population that can be sustained in each habitat patch. This information should then be used in a population viability analysis (PVA) for formulation of a minimum viable population program which will probably have to include integrated management of the captive and wild populations. It is not likely that over the next 50-100 years the subspecies can be sustained solely in free-ranging populations. The PVA would best be a joint exercise of the field and zoo people with establishment of a joint management group. It might be a useful Chinese model for other Chinese endangered species programs with a minimum of foreign involvement.

If it appears useful and if the Chinese request it, I would arrange time for a trip to China for the tiger program. ISIS has funding for the placement of ARKS, MEDARKS, and SPARKS computer software

in countries without hard currencies. The Shanghai and Beijing Zoos (and perhaps others) have computers. I could install the software and train someone in its use while there.

The trip was a very interesting and worthwhile experience for me. I appreciate the support from WWF to attend the meeting. The city of Hangzhou is very beautiful and the Chinese were splendid and gracious hosts. I look forward to an enduring relationship with our Chinese colleagues.

*Ulysses S. Seal*  
Tiger SSP Coordinator  
22 December 1988



## TIGER SSP ANNUAL MEETING

24 September 1988  
Milwaukee, WI

Propagation Group Members Present: Gerald Aquilina (Buffalo Zoo), Gerald Brady (Cheyenne Mountain Zoo), James Doherty (New York Zoo), Julian Duval (Indianapolis Zoo), Thomas Foote (AAZPA), Randall Rockwell (AAZPA), Dietrich Schaaf (Zoo Atlanta), Ulysses Seal (IUCN/CBSG), Alan Shoemaker (Riverbanks Zoo), Lee Simmons (Omaha Zoo), Gregory Tarry (Calgary Zoo), Ronald Tilson (Minnesota Zoo)

General Attendance: There were 98 people in addition to the Propagation Group present. Most participating institutions were represented.

Recorders: Gerald Binczik (Minnesota Zoo), Marialice Seal (Minneapolis, MN)

### Background

(U. Seal)

In September 1987 the Siberian Tiger SSP was expanded to encompass all tigers (*Panthera tigris*) in participating North American AAZPA zoos. The new Tiger SSP is being administered by:

Tiger SSP Coordinator	U. Seal
Subspecies Coordinators	G. Brady - Sumatran tigers
	R. Rockwell - Bengal/Hybrid tigers
	R. Tilson - Siberian tigers

Persons interested in replacing R. Rockwell and G. Brady as Subspecies Coordinators should contact U. Seal.

The structure and selection of the Propagation Group will not change. The group will remain the same size (9), and elections for group members will be held without regard to subspecies representation.

To date 83 institutions participate in the Tiger SSP, making this program - like the Siberian Tiger SSP before it - the largest in the SSP.

### Tiger SSP Masterplan Workshop

(U. Seal)

The draft minutes of the 11-13 July 1988 workshop in Apple Valley, MN as approved by workshop participants were distributed.

At July's meeting it was determined that there are 500-525 "manageable" tiger spaces in AAZPA/SSP institutions, and that these spaces could be used to meet the following potential goals for tiger populations in North America: 175 Siberian (*P.t. altaica*), 175 Sumatran (*P.t. sumatrae*) and 75-80 each of two other subspecies, proposed Bengal (*P.t. tigris*) and Indochinese (*P.t. corbetti*).

North American institutions by themselves cannot provide sufficient space to satisfy the genetic and demographic goals of the SSP (to preserve 90% of the remaining genetic diversity for 200 years) for these subspecies. Cooperation with other regional programs will be necessary. Approximately 800 (unverified) spaces, or space for 4 subspecies, exist in regions outside of North America.

The Europaisches Erhaltungszucht-Programm (EEP) is developing a masterplan for tigers (primarily Siberian). A meeting is being arranged for May 1989 in Leipzig, at the invitation of Siegfried Seifert (Leipzig Zoo) to complete activation of the European management plan and to develop regional goals.

The objective of the meeting of the Tiger SSP in Milwaukee was to review, revise, and approve the Tiger SSP Masterplan draft and draft recommendations of the Propagation Group prepared at the July meeting. Discussion of each point was initiated by the Propagation Group and continued with comments from the floor until a consensus was reached. The subspecies questions were examined in detail. The longest discussion concerned the role of the Tiger SSP with respect to white tigers and their inclusion as generic tigers given uncertainties of pedigrees.

**Taxa of Concern to the Tiger SSP**

(U. Seal)

Two different taxonomic strategies are possible for managing tigers in North American zoos: 1) A population of tigers could be maintained without regard to subspecies, or 2) Separate populations could be maintained of the different subspecies as currently identified (see Maguire and Lacy 1988).

**Biological Issues:**

Interpretation of the molecular studies is limited by sample sizes. Current molecular genetic studies (Goebel and Whitmore 1987, O'Brien et. al 1987) indicate the named subspecies are so closely related that it is difficult to separate them as subspecies based on genetic distance calculations. But morphology studies (Herrington 1987) seem to indicate the wild-caught stock of the various subspecies are distinct whereas skeletal material from zoo tigers appears as a mixture of the wild-caught forms examined.

The maximum amount of genetic diversity appears to be present in the Bengal tiger, the Siberian and Sumatran tigers appear to be impoverished subsets of the species.

The most conservative course of action for now is to maintain subspecies populations across the current range of the species. When choosing subspecies for protection, the Tiger SSP should consider the numbers of animals existing within those subspecies. Also, new founders for a subspecies population should be selected across the range of that subspecies for a broader sampling of the remaining genetic diversity.

The Tiger SSP has a responsibility to: 1) acquire new data for a more definitive phylogenetic study, and 2) acquire sufficient funds to analyze these samples. Until then the management strategy should be designed so as not to lose future options. A discussion of sampling theory will need to be held prior to initiation of the study.

**Political Issues:**

There was unanimous agreement by wildlife representatives from the countries of origin in opposition to return of generic tigers to wild populations.

**RECOMMENDATION 1 (p.10, Masterplan Minutes)**

- The Tiger SSP should place priority on the preservation of options by managing separate subspecies of tigers of known geographic origins that respect biopolitical boundaries - was approved by the Propagation Group.

**RECOMMENDATION 2 (p.10, Masterplan Minutes)**

- All described 'subspecies' of tigers should be treated as separate taxa for the immediate future - was approved by the Propagation Group.

**RECOMMENDATION 3 (p.10, Masterplan Minutes)**

- SSP programs should be developed for 4 taxa: Siberian, Sumatran, Bengal and Indochinese - was approved by the Propagation Group.

**RECOMMENDATION 9 (p.11 Masterplan Minutes)**

- Based in part upon MVP calculations, the SSP should strive to achieve the following carrying capacities: Siberian 175-200, Sumatran 175, Bengal 70-80, and Indochinese 70-80 - was approved by the Propagation Group.

China has offered 2 South Chinese tigers (*P.T. amoyensis*) in exchange for money. The Propagation Group does not recommend pursuing this offer, but suggests instead that the Chinese initiate their own program with the subspecies. The South Chinese tiger was therefore not chosen as one of the 4 subspecies to include in the Tiger SSP.

**RECOMMENDATION 4 (p.10, Masterplan Minutes)**

- Consideration of the South Chinese tiger should depend upon an explicit request from the Chinese for a cooperative program (with a species survival plan based on a population viability analysis) whose primary base would be in Chinese zoos - was approved by the Propagation Group.

**Generic Tigers**

(R. Rockwell and U. Seal)

There are approximately 500 tigers in North America, 200 in SSP institutions, without full pedigrees or with pedigrees demonstrating hybridization. With respect to unknown pedigrees, only animals which can be traced back to wild-caught founders can be included in the program. The computer database for generic tigers was based on ISIS information. This information is largely



Tiger SSP Annual Meeting continued ...

inadequate and confused - participating institutions have a responsibility to report accurate and complete information to ISIS.

Under an earlier recommendation, a moratorium on breeding generic tigers exists. The strategy is to replace these animals with program animals as space becomes available.

**RECOMMENDATION 10 (p.11, Masterplan Minutes) - Generic tigers should not be bred, but should be managed for extinction in SSP institutions - was approved by the Propagation Group.**

**White Tigers**

(R. Rockwell and U. Seal)

Should the Tiger SSP officially recognize white tigers? Are institutions holding white tigers SSP participants in the Tiger SSP? By pedigree analysis, white tigers are generics and thus they are not acceptable for use in any pure subspecies population.

Edward Maruska (Cincinnati Zoo) has accepted the role of special advisor to the Tiger SSP on the issue of white tigers.

So as not to compromise the focus of the Tiger SSP, white tigers should not be included but instead should be monitored. A separate computer

database could be maintained and the Tiger SSP could report on them on a regular basis. With respect to the masterplan they could be placed in an appendix.

The consensus of the Propagation Group and the membership appears to have moved toward not recognizing white tigers as an SSP management group, but rather designating white tigers with all other generics and recommending they be managed to extinction.

**RECOMMENDATION 7 (p.11, Masterplan Minutes) - White tigers should be included with other generic tigers (under RECOMMENDATION 10) and managed for extinction - was approved by the Propagation Group.**

The draft recommendation from the July Propagation Group meeting - White tigers (and heterozygotes) should be managed as a separate unit in the SSP in their current stock mix. This group should be managed for containment to a maximum of 60 spaces in SSP Institutions - was REJECTED by the Propagation Group.

**RECOMMENDATION 8 (p.11, Masterplan Minutes) - Generic tigers (including white tigers) should not be used for reintroduction purposes in India, either for captive or free-ranging populations (revised from draft) - was approved by the Propagation Group.**

**Sumatran Tigers**

(Jonathon Ballou and G. Brady)

The current North American population consists of 23 animals (9 males, 14 females) in 7 zoos (Miller Park, Cheyenne Mountain Park, Fresno, San Diego, San Diego Wild Animal Park, National, Woodland Park). A total of 13 zoos have expressed an interest in working with this subspecies to date. Given the demographic parameters of the population - i.e. generation time, sex ratio, average litter size, etc. - the Tiger SSP will reach the targeted carrying capacity for Sumatran tigers of 178 in about 14 years. Space will be made available for this expanding population as the generic tiger population decreases.

The North American population of Sumatran tigers is currently based on 15 founders, 9 effective founders. Future management of the existing population could possibly raise the number of effective founders to 13. There is a need for new founder stock to reach the desired number of 26 effective founders for the population. This could be accomplished by exchanging animals between the North American and European populations, importing new founders from Indonesia (animals already scheduled to be sent to the National, Atlanta, Phoenix and Henry Doorly Zoos from the Jakarta Zoo will add 1 1/2 effective founders) and perhaps Rotterdam.

**RECOMMENDATION 5 (p.11, Masterplan Minutes)** - Exchanges of Sumatran tigers should be initiated with the European population to benefit the genetic composition of both populations - was approved by the Propagation Group.

**RECOMMENDATION 6 (p.11, Masterplan Minutes)** - An initiative should be developed with Indonesia to obtain 8 more surviving wild-caught Sumatran tigers, preferably from widely distributed locations, as founder stock for the captive population - was approved by the Propagation Group.

The institution by institution recommendations for Sumatran tigers were approved by the Propagation Group for distribution and implementation.

**Siberian Tigers**

(U. Seal and R. Tilson)

The current North American population of Siberian tigers consists of 192 animals in 58 zoos. Population viability analyses based on the generation time, sex ratio, litter size, etc. of the population offer a good prognosis. The rate of growth is effectively 0, demonstrating that the earlier goals of the Siberian Tiger SSP are being accomplished.

In accordance with these goals, a targeted 10-12 litters will be produced per year, and approximately 90 animals now in the population will be surplus over the next 3 years. The SSP population is based on only 11 effective founders. That number may increase as some animals' genetic contribution increases, but the North American population will undoubtedly require new founders. The Soviet Union has indicated an interest in supplying stock. This offer requires careful analysis prior to arrangement and will be discussed further at the mid-year meeting.

The institution by institution recommendations for Siberian tigers were approved by the Propagation Group for distribution and implementation.

**Miscellaneous**

**RECOMMENDATION 11 (p.11, Masterplan Minutes)** - Current copies of all Tiger SSP databases, correspondence, etc. for all tiger subspecies should be maintained in a central file at the Minnesota Zoo for the Species Coordinator - was approved by the Propagation Group.

**RECOMMENDATION 12 (p.11, Masterplan Minutes)** - Breeding institutions should be required to hold the pair and a litter of offspring for up to 3 years - was approved by the Propagation Group.

**RECOMMENDATION 13 (p.11, Masterplan Minutes)** - Institutions holding pairs of several subspecies but unwilling to hold any offspring should be urged to reduce the diversity of their holdings to allow managing offspring as well - was approved by the Propagation Group.

Propagation Group members agreed to collate tiger necropsy reports from their assigned institutions and send the reports to Albert Lewandowski (Detroit Zoo) for analysis for patterns in mortality.

**RECOMMENDATION 14 (p.11, Masterplan Minutes)** - The Tiger SSP Propagation Group should meet again in a mid-year workshop to implement the Masterplan - was approved by the Propagation Group. A mid-year meeting was tentatively scheduled for 4-5 April 1989 in Atlanta (in conjunction with the regional AAZPA conference).

The Propagation Group approved plans to invoice institutions for the cost of the tiger masterplan books.

Tiger SSP participants need to advance cooperative programs toward a world plan for tigers. For this purpose another international tiger symposium should be scheduled for 1990. Interested persons should contact R. Tilson or U. Seal.

Discussion of the issues raised in these minutes will be continued at the mid-year meeting of the Propagation Group.

**Literature Cited**

- Goebel, A.M. and D.H. Whitmore. 1987. Use of electrophoretic data in the reevaluation of tiger systematics. In: R.L. Tilson and U.S. Seal (Editors), *Tigers of the World: The Biology, Biopolitics, Management and Conservation of an Endangered Species*. pp. 36-50. Park Ridge, NJ: Noyes Publications.
- Herrington, S.J. 1987. Subspecies and the conservation of *Panthera tigris*: Preserving genetic heterogeneity. In: R.L. Tilson and U.S. Seal (Editors), *Tigers of the World: The Biology, Biopolitics, Management and Conservation of an Endangered Species*. pp. 51-61. Park Ridge, NJ: Noyes Publications.
- Maguire, L.A. and R.C. Lacy. 1988 (submitted for publication). Allocating scarce resources for conservation of endangered subspecies: Partitioning zoo space for tigers. 43pp.
- O'Brien, S.J., G.E. Collier, R.E. Benveniste, W.G. Nash, A.K. Newman, J.M. Simonson, M.A. Eichelberger, U.S. Seal, D. Janssen, M. Bush and D.E. Wildt. 1987. Setting the molecular clock in felidae: The great cats, *Panthera*. In: R.L. Tilson and U.S. Seal (Editors), *Tigers of the World: The Biology, Biopolitics, Management and Conservation of an Endangered Species*. pp. 10-27. Park Ridge, NJ: Noyes Publications.
- Tilson, R.L. and U.S. Seal. 1987. (Editors) *Tigers of the World: The Biology, Biopolitics, Management and Conservation of an Endangered Species*. Park Ridge, NJ: Noyes Publications.

## TIGER TALES

A major purpose of this newsletter is to support the lines of communication between captive and wildlife managers, which are so important to the implementation of a global tiger conservation plan. To that end we invite our overseas colleagues to submit brief updates on tiger subspecies in their countries of origin.

from H.S. Panwar of Dehra Dun, India (30 September 1987)...

A country-wide census of tigers in India is carried out once every four years. The last such census was in 1984, at which time the tiger population was estimated to be 4,005.

An important new reserve, the Dudhwa Tiger Reserve, has been added to the family of tiger reserves under Project Tiger. This 16th tiger reserve encompasses 810 km<sup>2</sup> of the *terai* (flood plains) of the central Himalayan foot hills. Of this the *santoum santoram* (core) is 648 km<sup>2</sup> and the buffer is 162 km<sup>2</sup>. The tiger population here is over 60. Dudhwa is an important addition in that it brings a new habitat type in the central *terai* under Project Tiger's protective umbrella.

Further, the Government of India has sanctioned 100 per cent assistance for all research activities in the tiger reserves. These activities are to be coordinated by the Wildlife Institute of India which is headed by myself.

from John H. Blower of Guernsey, Channel Islands (13 November 1987)...

Reference the item in the Newsletter, "Where Are All The Tigers?" - I am afraid it is  $\pm$  100% certain that there are no tigers left in Meru Betiri National Park, Indonesia (I worked for FAO and WWF in Indonesia for seven years). There are some tigers in Bhutan (where I have also worked), though I couldn't hazard a guess as to how many. They only occur in the southern lowlands near the Indian border, and it is unlikely that there are more than 50, but I could be wrong.

from Charles McDougal of Kathmandu, Nepal (19 December 1987)...

Several years ago, Dave Smith estimated 55-60 breeding adult animals for the Chitwan population, spanning not only Royal Chitwan National Park, but also Parsa Wildlife Reserve, Bara Hunting Reserve, and the Balmiki Wildlife Sanctuary in adjacent India. The area of the Parsa Reserve is 545 km<sup>2</sup>, not 45 km<sup>2</sup> as shown in the Newsletter. The Bara area was to be 550 km<sup>2</sup> - it has not actually been declared a hunting reserve. The Balmiki Wildlife Sanctuary is in Bihar State, adjacent to the western part of Chitwan, and covers 461 km<sup>2</sup>.

At the time Smith estimated 24-30 breeding adults in Royal Chitwan National Park itself. I would say that there are now at least 30 and possibly 35, since there has been some increase in the areas I have been monitoring since Smith's work.

Last spring I accompanied Smith on a survey in western Nepal, where we observed tiger habitat outside of existing reserves. We found much more evidence of tigers than we expected. The Bardiya population is at least as big as the Chitwan population. It is located not only in Royal Bardiya Wildlife Reserve but extends, continuously distributed, from the west part of Deukhuri District in a belt across Banke, Bardiya, and Kailali Districts and into Kanchanpur. There are definitely nowhere near 100+ tigers in Bardiya Wildlife Reserve itself. The number of breeding adults in the whole Bardiya population would be well under 100, and probably about equal to or slightly larger than the Chitwan population. The Suklaphanta population is spatially separated from the Bardiya one. It certainly does not contain more than 20 breeding animals, and probably less.

Sticking to adult breeding animals, I estimate 60-65 for the Chitwan population, 60-75 for the Bardiya population, and 15-20 for the Suklaphanta population.

and extracted from Population Characteristics and Social-Spatial Patterns of the Tiger (*Panthera tigris*) on the Eastern Macroslope of the Sikhote-Alin Mountain Range, USSR\* (Soviet Academy of Sciences), written by Anatoley P. Bragin of Vladivostok, USSR (received 6 May 1988)...

To ascertain the population characteristics of the Amur tiger, in 1984-85 a census was conducted in a 13,238 km<sup>2</sup> northern zone and a 10,388 km<sup>2</sup> southern zone on the eastern slope of the Sikhote-Alin mountain range. Data on the social-spatial organization were obtained while snowtracking two adult male and three adult female tigers in an area of 400 km<sup>2</sup> within the Lasovsky Reserve and adjacent areas.

In the northern zone, 25 (54.5%) adult and 20 (45.5%) immature tigers were recorded. In the southern zone, 29 (54.7%) adults and 24 (45.3%) juveniles were recorded. The male:female ratio among adult tigers was 1:1.2 and 1:1.1 for the northern and southern zones, respectively.

The travel routes of the two males completely overlapped, and also overlapped those of the

females. Interactions between males in the area of stationary observations were based on hierarchical principles. Avoidance of the dominant male by the subordinate male resulted in their use of the common space at different times. However, food supply and estrous females were accessible to the subordinate male while the dominant male was in transit. Both males were observed at different times to associate with the same female during her suspected recurrent heat periods.

Although tigresses also shared considerable common ground, each had an exclusive core area within her home range which was not used by other females. Interactions between females seemed to be based on mutual avoidance.

The results of this study have implications for species conservation. Due to the established type of social organization and sexual interactions between individuals, the Amur tiger can exist at lower numbers than the Bengal tiger without the threat of inbreeding depression (*this is probably challengeable* - Eds.).



---

# ANNOUNCEMENTS AND UPDATES

---

## Meetings

### Tiger SSP Midyear Meeting

4-5 April 1989  
Atlanta, Georgia

Propagation group members will convene at Zoo Atlanta to review and update the implementation of the Tiger SSP Masterplan.

Ulysses S. Seal  
Tiger SSP Coordinator  
Minnesota Zoo  
Apple Valley, MN 55124

### 2nd East Asiatic Bear Conference

4-8 August 1989  
Harbin, People's Republic of China

This meeting is being organized by the Heilongjiang Academy of Sciences and the Bear Research Association of Japan to promote communication and exchange of information among research institutes, universities and other organizations involved in research/conservation of the east Asiatic bear. Three sessions will be held covering the following topics: 1) wild ecology, 2) captive behavior, and 3) habitat, etc. conservation. (*Heilongjiang Province is the home of most of China's remaining Siberian tigers; perhaps participants could avail themselves of any opportunities to gather information/photographs of the habitat, etc., while they are there?* - Eds.)

Authors are required to prepare four copies of paper abstracts of under 400 words and mail them to Li Xiaomin by 1 June 1988. The deadline for manuscripts is 1 January 1989. Authors are encouraged to use color slides or transparencies.

Li Xiaomin  
Secretary of 2nd East  
Asiatic Bear Conference  
Institute of Natural Resources  
Heilongjiang Academy of Sciences  
No. 25, Heping Road  
Harbin, People's Republic of China

## Research Update

### University of Minnesota

Collaborative work with the Minnesota Zoo on the artificial insemination of Siberian tigers continues. A new article, "In vitro induction of capacitation of fresh and frozen spermatozoa of the Siberian tiger (*Panthera tigris*)", by A.P. Byers, A.G. Hunter, U.S. Seal, G.A. Biniczek, E.F. Graham, N.J. Reindl and R.L. Tilson was recently accepted for publication in the Journal of Reproduction and Fertility.

Ann P. Byers  
Department of Animal Science  
University of Minnesota  
St. Paul, MN 55108

## From Members

The Minnesota Zoo has a male Siberian tiger that pulls excessive amounts of hair from the forelegs, hindquarters, back and tail. Treatment to date (unsuccessful) has included short-term valium therapy, and transferring the animal to a novel environment. We would appreciate hearing from others who have experience with this behavior in tigers.

Nick Reindl  
Northern Trail Curator  
Minnesota Zoological Garden  
Apple Valley, MN 55124

---

MINNESOTA ZOO  
APPLE VALLEY, MN 55124  
(612) 431-9200

PANTHERA      TIGRIS

TIGER    SSP    MASTERPLAN

*DRAFT*

September 21, 1988

Tiger SSP Propagation Committee

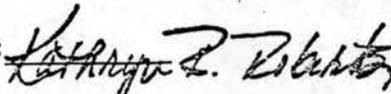
#### 46. SECURITY ISSUES

The Minnesota Zoo grounds, with the exception of the parking lots, are entirely enclosed within a 12-foot high chain-link fence with triple-stranded barbed wire. Access is restricted by two locked perimeter gates. In addition all animals with the exception of birds and dolphins are returned to locked holding areas at night. The Minnesota Zoo employs a full-time first aid officer, and engineers on-site around-the-clock assist in preventing unauthorized entry. Local police squads routinely patrol the grounds and perimeter fence. Electronic surveillance is used to monitor sensitive areas, and computers monitor temperatures and lights in animal space located in Animal Health building, quarantine areas and certain surplus holding facilities.

Access is controlled through a key system. All exterior and interior gates, buildings and animal holding areas are locked and accessible only to specified individuals.

In addition to the policies which follow in this section, all staff have been asked to report their presence on zoo grounds after hours to the heating plant engineer, both before entering and prior to leaving.

DIRECTOR'S SIGNATURE:



KEY/CORE POLICY AND PROCEDURES

POLICY: The Minnesota Zoological Garden shall provide adequate security through (1) an effective lock system and (2) distribution of keys to authorized staff to provide security, to prevent unauthorized access, to restrict entry and to protect MZG animals, property and personnel.

SCOPE: Physical Facilities shall be responsible for implementation and maintenance of an adequate lock system, manufacture and distribution of keys to authorized staff at the direction of the respective Division Directors.

PROCEDURES:

- A. A Grand Master system will be designed and installed to provide an adequate lock system throughout the MZG. (Areas outside the Grand Master system include Cash Control and the lock shop.)
- B. Key Distribution
1. Grand Master keys will be provided to the General Director and the Division Directors.
  2. Submasters will be provided to department supervisors controlling the areas under their supervision.
  3. Subdivisions of the submaster will provide keys for all other individual staff members for work areas only.
  4. The bearer of the master keys for each division shall be the responsible party for the distribution and retrieval of all keys and change in door key cores in areas of their division.
  5. Supervisors will prepare or provide for their employees a Key Request form with a justification for key possession. The supervisor will affix approval and forward on to the Division Director for approval.
  6. The key/core request will then be routed to the Operations Director for final approval who will forward the approved request to the Physical Facilities key custodian.
  7. The key custodian will cut the appropriate key, sign the request, and return both, along with a key control card, to the Division Director for key assignment to the requesting employee.
  8. The requesting employee will sign the key control card (to be returned

for retention to the key custodian) and the original key request for (to be retained by the Division Director) receipt of the key.

9. Lost and misplaced keys will be reported to the Division Director who will request replacement from the key custodian. In the event that keys are lost, requiring division group recoring, the cost of major recoring will be assessed against the division budget. Loss of an individual key will be assessed against the employee and they will pay a penalty per key based upon key cost and limited recoring costs up to \$5.00 per key.

C. Key Retrieval

1. Keys will be turned in upon termination of employment at the Minnesota Zoological Garden. The employee's last check will be held by Personnel until all keys and other MZG property are returned. It shall be the responsibility of the Division Director to see that keys are returned.
  - a. The employee will turn the keys in to the Operations key custodian who will sign off on the Personnel Department form for employment termination.
  - b. The key custodian will notify the Division Director, and the Division Director will then sign off on the Personnel Department form for employment termination.

D. Access Doors to Main Building

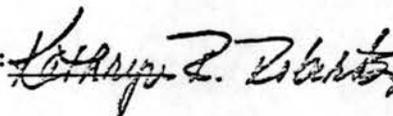
All access doors to the main building during specified night hours will be locked and electronically monitored; personnel entering and/or requiring access to the building will be required to notify the appropriate Division Director to obtain division approval.

Operations staff is responsible for locking and unlocking all access doors to the Main Building. Access doors are unlocked by Operations janitorial crew at 6:30 a.m.; the doors are locked by Operations engineering crew one hour after grounds close. A complete sweep of the building will be made to assure all visitors have left after the closing announcement on the P.A. System.

E. Malfunctioning Locks

Any malfunctioning locks, broken keys, etc. will be reported immediately to the Operations Division. Repairs will be made immediately.

DIRECTOR'S SIGNATURE:



#### AFTER HOURS SECURITY

POLICY: The Minnesota Zoological Garden shall provide security measures for zoo site.

SCOPE: Primary responsibility for non-public hours security lies with Operations Division night engineers who will make rounds of the zoo site to protect against unauthorized access. Daytime security is a responsibility of the entire zoo staff.

PROCEDURES:

- A. ~~Since the switchboard is not attended after business hours, all incoming calls will ring at the 432-3006 number in the heating plant.~~ To cover any emergency situations, by immediately contacting an engineer on site, a telephone answering machine will record messages and direct a caller to dial the voice pager in case of an emergency. The voice pager will be carried by the operating engineer at all times. The Apple Valley Police and Fire Departments are advised of this procedure.
- B. At the beginning of each shift, the operating engineer shall check the voice pager for proper operation to insure that it is ready for use. In the event the pager is inoperable, the Apple Vally Police will be informed, and the problem reported to the General Director for corrective action.
- C. The operating engineers shall become familiar with procedures for forwarding telephone calls to other employees on site.
- D. By 8:00 AM the operating engineers shall advise the switchboard operator of all messages left overnight.
- E. The main gate shall be opened at 6:00 AM daily, to accommodate keepers schedules. Biological Programs will advise the night engineers in advance if variations to the schedule are necessary.
- F. Gate #2 will be kept closed at all times. The keyswitch at Gate #2 is turned on, 24 hours a day, allowing staff access by automatic control. The keyswitch is turned off at 6:00 PM daily.
- G. Before closing the main gate, the patrolling engineer, and Guest Services Staff shall sweep the parking lots to be sure that all visitors are off the

site. If a visitor's vehicle is on the site and the owners cannot be located, place a notice slip on the car's windshield which will direct the owner in procedures to contact the engineer to gain exit.

#### SECURITY OF MAIN BUILDING

- A. All access doors to the main building during specified night hours will be locked and electronically monitored.
- B. To ensure that all visitors leave the ground prior to closing:
  - 1. The main entrance gate will be closed 4 p.m. winter, 6 p.m. summer.
  - 2. A sweep with the electric cart is made at the time of Northern Trail closing, by First Aid Staff advising all visitors that the Northern Trail is closed.
  - 3. A closing announcement is made over the P.A. system when all exhibits are closed. After the announcement, staff will tour the exhibit areas, advising all visitors that the zoo is closed.
  - 4. Admissions staff remain in the Visitor Service area until grounds are closed and assist visitors as needed.
- C. All main building access doors are locked by the Building Services staff one hour after grounds close.
- D. Access doors to the Main Building are unlocked by Physical Facilities janitorial crew at 6:00 A.M.

## Minnesota Zoological Garden Lock Policy

Each area (Northern Trail, Tropics, Birds, Minnesota, Childrens Zoo/Discovery Center and Animal Health) will establish a protocol specific to the area needs. These protocols will be attached to this document and will address specific locks and holding facilities within each area.

The following procedures will be in effect for the all animal holding facilities at the MZG unless specified in the individual area protocol. Locked is defined as a closed and secured lock or clip.

This policy will be enforced equally regardless of the employees<sup>1</sup> position and title.

- 1) All doors to cages, exhibits and holding areas will be closed and locked unless listed in the addendum.
- 2) All doors to cages not in use will be closed and locked.
- 3) Cage, exhibit and holding doors will only be open while working in the area.
- 4) All cages must be closed and locked whenever leaving a work area.
- 5) All locks will be double checked before leaving the work area.
- 6) Any unsafe work practice, area, equipment or situation must be reported to the curator or zoologist.
- 7) Cables, bolts hinges, hasps, locks, fencing or anything else relied upon for securing animals must be monitored on a daily basis.
- 8) Effective immediately there will be only one approved method for using a padlock with a hasp having a horizontal staple. The open lock shackle should first come up under the staple and then over before being snapped shut.

## Bird Area Lock Procedures

### Areas with Locks

- 1) All aviary access doors in public areas, at present this is only the Small Bird Aviary in the Tropics, Prairie Waterfowl and the Main Lake on the Northern Trail. As soon as locks are acquired all other aviary access doors, which presently have clips, will be locked. These are as follows:
  - two doors in lower Main Aviary
  - two gates in Main Aviary walkway
  - door in Main Aviary at feed board 8
  - door in lower Hornbill Aviary
- 2) Gibbon Lagoon access door from Leopard/Tapir holding  
Gallinule Exhibit door  
Hornbill Aviary access door through Small Clawed-Otter  
Muntjac Aviary holding access door  
All holding room Doors in "A" Bldg (exception for H15 where door needs to be open for ventilation / cage doors are locked)
- 3) Cages in "A" Bldg. H21 - H27 and H16 & H18.
- 3) Incubator Room / Brooder Room locked whenever they are not in use. The exception is door may be unlocked for short periods to allow access to electrical panels.

### Areas with Clips

- 1) Main Aviary Pen doors and hallway access
- 2) Muntjac Aviary exhibit access door from holding
- 3) "A" Bldg bird holding cages H28A & H28B, individual cages in H40 and H43 - H50.
- 4) Minnesota Aviary
- 5) LT130 holding area

Locks may be placed on any of these areas if the birds present have the ability to remove clips (i.e. parrots).

The aviary pen hallway and the individual pens are often used to capture birds and are therefore left open. Signage will be placed in the area when doors are left open.

Any avian species held in other animal holding areas will defer to the method of locking normally used in that area unless otherwise noted.

### High Risk Species

There are no high risk species in the area at this time.

## Mn Trail Addendum to MZG Lock Policy

### Dangerous Animals:

Mn Trail's "Dangerous animals" as referred to in the MZG lock policy will be: puma, wolverine, lynx, and rattlesnake.

### Mn Exterior:

The beaver pond door and the Mn Exterior entry door will be unsecured in the AM and secured after closing. The filter room and sump room doors must remain closed and secured when not in immediate use. The door between the Mn exterior and the filter room will normally be closed and unsecured. Various lateral shift doors will remain open when animals are allowed access to more than one cage. Exhibit shift doors may be open and unsecured when animals are given access to both exhibit and holding cages. The keeper door to exhibit will be flagged when an animal has access to the exhibit. Locks will be flagged when they must remain secure due to situations out of the ordinary.

### Mn Interior:

Whenever the bat exhibit door is unsecured the Mn Interior door must have a warning sign displayed on the outside. Whenever the rattlesnake exhibit is unsecured a warning sign must be displayed on the outside of the snake holding door and snake handling protocol must be followed. The Mn interior kitchen door will remain secured when not in immediate use. The door between Mn interior kitchen and interior holding will be closed and unsecured. The Mn aviary door will be secured with a clip. Striped skunk/rabbit/flying squirrel holding cages, ermine holding cages, some temporary cages and the door between ermine holding and snake holding will not be secured with locks or clips.

### Interns:

Interns will not be issued keys until they have worked on Mn Trail for at least three weeks. Prior to issuing 4C keys to interns the curator will discuss the situation with the zoologist and the keeper who has worked most often with the intern. The curator takes the responsibility for issuing 4C keys to interns. Any keeper loaning keys to an intern takes responsibility for the use of those keys. Interns will not use their 4C keys to shift pumas. Interns will lose the use of 4C keys if they make any security error.

NORTHERN TRAIL  
Lock Policy Addendum

Each animal area of the Northern Trail is identified, exceptions to the locking policy are identified.

A. KOALA

The service entry door and exhibit door are secured with a 4C door lock. The exhibit door is secured at all times, other than when servicing the exhibit or inspecting the animals. The service entry door should be secured at all times, including when staff are present, servicing the exhibit. The two holding cages will be closed and secured with a lock only when housing an animal when staff are not present.

The koala keeper is assigned responsibility to secure the exhibit doors at the end of the exhibit hours.

B. TIGER HOLDING

Lions and Tigers are high risk animals by definition of this policy.

All interior holding cage doors are locked and bolted shut at all times. Lateral shift doors are locked when shut, isolating individuals. When lateral shift doors are open for multiple cage access the shift bar shall be extended and rest on the floor.

Shift doors allowing access between indoor and outdoor areas shall be locked when closed. Padlocks may be left unlocked when these shift doors are open.

Tiger exterior fence line is walked daily. All perimeter exhibit gates (4) are double chained and locked.

C. ARCTIC FOX

Service doors to the exhibit and two holding cages are locked. The shift doors between cages and between the cages and the exhibit may be secured with clips. Locks must be employed to secure all holding cages when security of the exhibit perimeter has been compromised through damage or during maintenance procedures.

D. RED PANDA

The service entry to these holding areas must be secured with a padlock when not being serviced.

E. COYOTE

Exhibit access door and shift doors between exhibit and holding are locked with padlocks. The service access door entering NT505 is secured with a padlock. The doors entering NT506 and NT507 from NT505 are secured with clips, as are the nest box access doors.

F. ISOLATION BARN

All access doors and lateral shift doors to animal isolation stalls inside and outside are secured with padlocks.

Kitchen and garage door are unlocked while keepers are present in the area, they are locked when keepers leave for an extended period of time.

The service corridor gate is kept shut and locked unless keepers are working in the area.

G. MOOSE, HORSE, CAMEL, PRONGHORN

All pen doors are secured with padlocks. Herd pen doors are closed and locked when not being serviced. Service corridor gates are opened during servicing procedures and are locked closed when staff is not working in the area.

The service gate between NT429 and NT496 is secured with a clip.

The service gate between NT434 and NT498 is secured with a clip.

H. WOLF

This is a high risk animal by definition of this policy.

The exhibit gate, the service access gate and the entry gate to the holding area NT583 are all secured with padlocks.

The gate between NT582 and NT583 is secured with a clip.

The guillotine gate between NT580 and NT582 is routinely secured with a clip. This gate is secured with a pin and padlock when wolves are secured in holding for exhibit servicing.

The sliding fence panel between NT582 and 583 is secured with a padlock.

I. BISON, MUSK OX, CARIBOU

All gates and shift doors are secured with padlocks. Herd pen doors at each of these holding areas will be closed and locked when not being serviced. Service entry at musk ox and caribou are secured with locked doors. The service entry to bison/elk is not locked.

J. PERIMETER GATES AND FENCES

Lions/Tigers, Wolves, Coyotes. All fences checked daily. Bison/Elk, Moose, Pronghorn, Horse/Camel, Musk Ox and Caribou exhibit fences will be inspected the first Monday of each month. Off exhibit holding area fences will be inspected monthly while occupied.

NOTE

A total of 100 padlocks must be purchased for Northern Trail use prior to the implementation of this locking protocol.

TROPICS-A  
Lock Policy Addendum

1. High risk species include:
  - a. false gavia
  - b. flying fox
  - c. lion-tailed macaque
  - d. Japanese macaque
  - e. white-cheeked gibbon
  - f. clouded leopard
  - g. spotted leopard
  - h. sloth bear
  - i. Asian tapir
  
2. Cages for which clips are substituted for locks:
  - a. reptile, amphibian holding cages (H53-H55). Service door into H53-H55 will remain locked at all times.
  - b. tree shrew shift doors between OB169, OB170
  - c. muntjac shift doors between OB190, OB191
  - d. chevrotain "box" cages in LT139
  
3. Cages for which shift panel blocks are acceptable:
  - a. chevrotain shift panels between OA242A, OA242B, OA243A & OA243B (blocks will be fabricated)

**47. People trained in use of standard capture equipment:**

MN Trail staff:

Mike DonCarlos, Curator  
Chris Kline, Zoologist  
Dee Schoeberl, Zookeeper  
Sandy Koslowski, Zookeeper  
Becky Anderson-Hinwood, Zookeeper  
Janis Stich, Zookeeper

Tropics Trail (Birds)

Jimmy Pichner, Curator  
Perry LaBelle, Zookeeper  
Diane Fusco, Zookeeper  
Larry Vorwerk, Zoologist

ALSO SEE SECTION 26-29 FOR POLICY FOR ANIMAL ESCAPES AND FIREARM POLICY

54. COOPERATIVE PROGRAMS:

Zoo Veterinarian Peri Wolff is a Clinical Assistant Professor in the Large Animal and Small Animal clinics at the University of Minnesota Veterinary College.

Conservation Director Ron Tilson, in his capacity as an associate faculty member of the Department of Fisheries and Wildlife at the University of Minnesota, advises graduate students on thesis work.

The Zoo's senior vet student extern program through the University of Minnesota and other college programs is about one year old. The Animal Health department also has veterinary technician intern students through the University of Minnesota - Waseca and MIM.

Educational cooperative programs with colleges and universities include (1) Teacher In-Services and workshops offered for college credit through the University of Minnesota and Mankato State University, and (2) Internships in interpretation and animal science are offered to college juniors and seniors through a variety of midwestern colleges.

DIRECTOR'S SIGNATURE: *George F. Ziehl*

#### RESEARCH PROPOSAL PROTOCOL

POLICY: The Minnesota Zoological Garden supports basic and applied research on all aspects of zoo biology - ethology, physiology, pathology/anatomy/microbiology, genetics/demography, education, animal husbandry and/or management, reproduction, conservation, and all empirical aspects of the exhibition and maintenance of wild animals in captive settings. Veterinary and horticultural studies are also welcome.

The MZG's primary contribution to research projects will be in providing access to the facilities and animal collection. The MZG is limited in its ability to provide monetary support or staff assistance. All proposals must be compatible with the captive management policies of the MZG and be directed towards species currently held captive by the MZG, species identified in our Capital Plan, or free-living species on MZG grounds.

#### APPLICATION PROCEDURE

Before a proposal is fully developed, the researcher should contact MZG's Curator of Research to answer questions about animal availability, ages, sex ratios, enclosures, management routines, etc. Following the discussion(s) a formal typewritten proposal (in triplicate) on forms available from the office of the Curator of Research should be delivered to the MZG.

All applications will be reviewed by MZG's Animal Management Committee consisting of, but not limited to, the Director of Biological Programs, Research Curator, Staff Veterinarian, and Zoological Curators. Approval of proposals is based on 1) biological significance; 2) feasibility and relevance; and 3) the ability to complete the problem within the time frame proposed. Projects may be scheduled to begin at any time of the year, may be species-specific or broadly comparative and may emphasize any aspect of zoo biology. Originality, objectivity and applicability are major considerations for selection.

A synopsis of the MZG animal inventory and a list of past and some potential research problems requested by the zoo staff is available by writing or calling the Research Curator.

MZG staff will be assigned as contacts for each investigation. They will assist in solving problems, ensuring effective execution, monitor compliance with agreed upon methods, and review results on a periodic basis. Project changes after initiation of the project must be reported in writing and will be re-reviewed by the Research Committee. Research projects may be terminated at any time if conflicts cannot be resolved, progress is unsatisfactory, agreements

are not adhered to, the research had unexpected and detrimental effects on the animal collection, or the research is incompatible with animal management needs.

#### MZG SUPPORT

Acceptance of a research project commits MZG support to the project as stated in the submitted proposal and within the guidelines and limitations imposed by the MZG. Project approval does not give researchers the authority to institute changes in scope or methodology without reapproval by MZG.

Noninvasive projects that require little or no assistance from MZG staff are most likely to be approved, although all zoo biology projects of merit will be considered. Researchers provide their own monies for equipment and expendable supplies. Limited funds may be obtained from the MZG depending on the project and the availability of funds.

Zoo admission and parking fees will be waived for the duration of research for all principal and co-investigators. This does not apply to friends or relatives. Access to non-public spaces is restricted to researchers. Violations will result in the termination of the investigation.

#### COMMITMENT IN EXCHANGE FOR MZG SUPPORT

Upon completion of the research project, a written summary report of the results, conclusions and/or recommendations must be submitted to the MZG via the Research Curator. This report is due within four months of completing on-site data collection unless other arrangements have been made. The MZG reserves the option of requesting the investigator(s) to give a verbal presentation to MZG staff within the above framework. If the investigator fails to publish the final report within one year of the above date, the MZG reserves the option of submitting part or all of the report as their own publication.

Any publications, photographs or recordings resulting from MZG-sponsored research must acknowledge the MZG. All researchers must agree in writing to send three copies of each publication(s) to the MZG and to make available copies (at MZG expense) of any data, photographs, or recordings collected during the course of their study if requested by the MZG.

578

Minnesota Zoological Garden  
Infectious Waste Management Plan  
1990

- 1) Minnesota Zoological Garden  
12101 Johnny Cake Ridge Road  
Apple Valley, MN 55124  
(612) 431-9200
- 2) Kathryn Roberts, Ph.D.
- 3) Animal Health Division - Animal Hospital  
Biological Programs Division - Animal Holding areas
- 4) Laboratory Waste and Sharps
- 5) All laboratory waste is separated and placed in Biohazard bags in a plastic container marked BIOHAZARD. All sharps after being used are placed in approved sharps containers and stored within these containers until disposal.
- 6) All sharps are packaged in puncture and leak proof containers. All laboratory waste is packaged in plastic bags within plastic spill proof containers.
- 7) All laboratory waste is placed in bags marked with the biohazard symbol. This waste is stored in a plastic container marked with the biohazard symbol. This waste is then stored in a cabinet marked with the words INFECTIOUS WASTE. All sharps are placed in containers marked with the words, INFECTIOUS WASTE. All full sharps containers are stored in boxes that are marked with the words INFECTIOUS WASTE.
- 8) All laboratory waste is placed immediately into a biohazard bag. All sharps that are generated within the hospital are placed within the storage area by the hospital personnel. All sharps that are generated outside of the hospital are placed into approved sharps containers and brought to the hospital, (central collection point) when they are full.
- 9) TEMPORARY COLLECTION POINTS:
  - a) No laboratory waste is generated outside of the central collection point. All sharps that are generated outside of the central collection point are stored in approved sharps containers until such time that the container is full. The containers hold approximately one quart and will fill up in variable amounts of time, depending upon usage.
  - b) All sharps containers that are in temporary collection points are located in areas, (counter tops) where there is no access by vermin and where only authorized persons have access.

CENTRAL STORAGE FACILITY:

- a) Laboratory waste is stored on site for approximately two weeks depending on amount of waste generated. Sharps are stored until designated containers are full, approximately two to three weeks.
  - b) Laboratory waste is the only waste that is treated on site. When the two gallon container is full then waste is decontaminated.
  - c) Laboratory waste is stored in a raised metal cabinet within a room that is accessible to authorized persons only. Sharps are stored in a metal cooler within a room that is accessible to authorized persons only.
  - d) Sharps are stored within a walk-in cooler at refrigerator temperatures (40°F) until they are removed from the site.
- 10) Non-sharps laboratory waste is decontaminated on site prior to disposal. The amount of this waste is from one to three gallons per month.
- 11) Not applicable. No human regulated body fluids are generated on site. Any animal body fluids that are sewered are done so only at the central collection point and amount to approximately 10 ml. per month.
- 12) NOT APPLICABLE
- 13) All sharps are transported off site for disposal by:

BFI MEDICAL WASTE SYSTEMS OF MINNESOTA, INC.  
14201 WEST 62nd St.  
EDEN PRAIRIE, MN 55346  
(612) 937-0913

- 14) All sharps are disposed of by:

BFI MEDICAL WASTE SYSTEMS OF MINNESOTA, INC  
14201 WEST 62nd St.  
EDEN PRAIRIE, MN 55346  
(612) 937-0913

This company provides disposal by incineration and also provides manifest. The Minnesota Zoo provides this company with approximately eight to sixteen gallons of infectious waste per month.

- 15) Minnesota Zoo employees that may come into contact with any infectious waste will be trained by the Animal Health Division staff in the proper way to handle and dispose of such waste. This training will be done on a yearly basis and will be updated if any changes in procedure are made. Individual responsible for management of infectious waste is:  
Peregrine L. Wolff, DVM  
(612) 431-9361

The Minnesota Zoo requires that all employees will go through OSHA EMPLOYEE RIGHT-TO-KNOW training in reference to proper handling of infectious waste after starting employment at the Zoo.

All employees that may be exposed to hazardous materials are provided with and required to wear protective clothing during that exposure period.

- 16) All infectious waste that is generated on site could be decontaminated and stored at (40°F) in vermin proof, areas that were inaccessible to unauthorized persons until such time that another waste disposal facility and company could be located.

- 18) Peregrine L. Wolff D.V.M.  
Kristine R. Petrini D.V.M.  
Terry J. Kreeger D.V.M.  
Brian E. Joseph, D.V.M.

This plan reflects the current handling of infectious wastes generated by the Minnesota Zoological Garden

\_\_\_\_\_ Date \_\_\_\_\_  
General Director  
Minnesota Zoological Garden

Minnesota Zoo Research During FY 1990

- Title: Scent-Marking in Tigers: The Role of Urine in Intraspecific Communication  
By: Susan D. Booth (University of Minnesota)  
Status: approved 25 February 1987  
data analysis completed, write-up initiated, to be completed in FY 1990
- Title: An Investigation of the Causes of Mortality in Zoolab's Touchtanks  
By: Judy Thompson and Jim Streater (MZG staff)  
Status: approved 2 September 1987  
write-up initiated, to be completed in FY 1990
- Title: Captive Breeding of Sex Role-Reversed Hemipodes  
By: Albert J. Fivizzani (University of North Dakota)  
Status: approved 25 November 1987  
data analysis to be completed in FY 1990, write-up to follow
- Title: Identification of the Species of Origin of Residual Blood on Lithic Material  
By: David C. Hyland (University of Pittsburgh)  
Status: approved 2 March 1988  
resultant publication "Identification of the Species of Origin of Residual Blood on Lithic Material: A Case Study from the Shoop Site, Central Pennsylvania" in press
- Title: Characterization of the Estrous Cycle and Pregnancy in Malayan Tapir  
By: Katherine A. Castle (MZG staff)  
Status: approved 9 March 1988  
data collection completed, data analysis to be initiated in FY 1990
- Title: Test of Methods for Paternity Analysis of Japanese Macaques I. Protein Markers, and II. DNA Fingerprinting  
By: Frederick W. Lorey (University of Minnesota) and Mark L. Weiss (Wayne State University)  
Status: approved 9 March 1988  
write-up initiated, to be completed in FY 1990
- Title: Estrus Characterization and Pregnancy Determination in Malayan Chevrotain  
By: Katherine A. Castle and Beth Jo Schoeberl (MZG staff)  
Status: approved 1 June 1988  
data collection to be completed in FY 1990, data analysis to follow
- Title: Effective Exhibition of Bird Species in the Minnesota Zoo's Free-Flight Aviaries  
By: Jackie M. Fallon (MZG staff)  
Status: approved 6 July 1988  
data analysis to be completed in FY 1990, write-up to follow

Title: Electrophoresis and Protein Immunology in the Order Carnivora  
By: T. N. Chapman and James C. Travis (both University of North Carolina)  
Status: approved 6 July 1988  
data analysis initiated, to continue in FY 1990

Title: Reproductive Biology of Asian Small-Clawed Otters  
By: Gerald A. Binczik and Jay Petersen (MZG staff)  
Status: approved 5 October 1988  
data collection initiated, to continue in FY 1990

Title: Analysis of Genetic Variation in Mustelids  
By: Robert C. Lacy (Brookfield Zoo)  
Status: approved 9 November 1988  
data analysis initiated, to continue in FY 1990

Title: Diabetes Mellitus and Islet Amyloid Polypeptide in Celebes Macaque  
By: Timothy D. O'Brien and Kenneth H. Johnson (both University of Minnesota)  
Status: approved 28 December 1988  
data analysis initiated, to continue in FY 1990

Title: Physiological Assessment of Moose and Caribou Nutritional Status During Winter  
By: Glenn D. DelGiudice (University of Minnesota) and Ulysses S. Seal (IUCN/CBSG)  
Status: approved 28 December 1988  
data analysis initiated, to be completed in FY 1990, write-up to follow

Title: Prevalence of *Giardia* in Selected Bird Species  
By: Stanley L. Erlandsen and William J. Bemrick (both University of Minnesota)  
Status: approved 15 February 1989  
data collection initiated, to continue in FY 1990

Title: Use of MGA Implant to Reduce Aggressive Behavior in Lion-Tailed Macaque  
By: Katherine A. Castle (MZG staff)  
Status: approved 26 April 1989  
data collection completed, data analysis initiated, to continue in FY 1990

Title: Seasonality in the Male Siberian Tiger  
By: Ann P. Byers (University of Minnesota)  
Status: approved 31 May 1989  
data collection initiated and completed, data analysis initiated, to be completed in FY 1990, write-up to follow

Title: Hormonal Induction, *In Vitro* Fertilization and Embryo Transfer in the Tiger  
By: Ann M. Miller and David E. Wildt (both National Zoo)  
Status: approved 31 May 1989  
data collection initiated, to continue in FY 1990

Title: Genome Size Variation in Endangered Species of Felidae  
By: Ellen M. Rasch (East Tennessee State University)  
Status: approved 31 May 1989  
data collection to be initiated in FY 1990

Title: Volatile Components of Asian Small-Clawed Otter Scent  
By: Pat Foster-Turley (Marine World Africa USA)  
Status: approved 31 May 1989  
data collection initiated and completed, data analysis to be  
initiated in FY 1990

Title: Phylogenetic Relationships of Canidae  
By: Ulysses S. Seal  
Status: approved 6 September 1989  
data collection to be initiated in FY 1990

STAFF/INSTITUTE RESEARCH PROPOSAL  
FOR THE  
MINNESOTA ZOOLOGICAL GARDEN

Information must be typed in the space allowed on one side of the page only and limited to these three pages. If additional materials are essential to a full understanding of the project they must be attached. Return three copies of completed form to the Conservation Biologist.

1. Principal Investigator(s):

\_\_\_\_\_  
Name (last, first, middle)

\_\_\_\_\_  
Present Position and Telephone Number (extension)

\_\_\_\_\_  
Home Address and Telephone Number

2. Project Title (10 words or less): \_\_\_\_\_

a. Common and scientific name of animal(s) involved: \_\_\_\_\_

b. Facilities and equipment needed: \_\_\_\_\_

c. MZG staff assistance needed: \_\_\_\_\_

d. Funds requested from MZG (detail in #6): \$ \_\_\_\_\_

e. Expected duration of project (specify dates of field and laboratory study): \_\_\_\_\_

f. If MZG staff, time needed (requested) away from regular duties: \_\_\_\_\_

3. Background and Qualifications of Principle Investigator(s) (curriculum vitae may additionally be attached)

a. Length at present position: \_\_\_\_\_

b. Education and degrees (include institution and date):  
\_\_\_\_\_  
\_\_\_\_\_

c. Other qualifications pertinent to proposed research:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4. Abstract of Proposed Research:

5. Significance of Proposed Research to MZG:

6. Budget for Funds Requested from MZG. Budget items must be listed with precision and in detail. All items purchased are the property of MZG:

7. Detailed Description of Proposed Project. Relate what you propose to do to previous and current work on the subject by yourself or others. Cite references to published work. Detail the methodology that will be used, and describe any special techniques:

Approval of appropriate Curator

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Approval of Conservation Biologist

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Distribute copies to: Director of Biological Programs, Veterinarian,  
appropriate Curator, area supervisor.

Gerald Allen Binczik  
25 N. Milton Street  
St. Paul, MN 55104  
(612) 222-0184 home  
(612) 431-9206 work

---

### Education

September 1989 to Present  
Pursuing M.S. in Wildlife Conservation:  
University of Minnesota, St. Paul, MN

August 1983 to August 1984  
B.S. in Zoology granted August 1984:  
Arizona State University, Tempe, AZ

September 1978 to June 1982:  
Northland College, Ashland, WI

### Pertinent Work Experience

February 1987 to Present:  
Conservation Biologist  
Duties: Help develop and coordinate zoo participation in biological conservation programs, initiate and conduct original research applicable to program goals, supervise research by students and outside investigators, instruct staff and students in aspects of biological conservation/research.  
Dr. Ronald Tilson, Minnesota Zoological Garden, Apple Valley, MN

November 1985 to February 1987:  
Research Assistant  
Duties: Assist Research Biologist in all phases of physiological and behavioral studies on captive animals.  
Dr. Ronald Tilson, Minnesota Zoological Garden, Apple Valley, MN

February 1984 to September 1984:  
Research Aide  
Duties: Assist with National Science Foundation-funded behavioral studies on a variety of invertebrates. Required extensive field work in desert and montane environments.  
Dr. John Alcock, Zoology Department, Arizona State University, Tempe, AZ

### Scientific Publications

- Binczik, G.A., N.J. Reindl, R. Taylor, U.S. Seal and R.L. Tilson. 1987. A neonatal growth model for captive Amur tigers. In: R.L. Tilson and U.S. Seal (Editors) Tigers of the World: The Biology, Biopolitics, Management and Conservation of an Endangered Species, pp. 167-170. Park Ridge, NJ: Noyes Publications.
- Byers, A.P., A.G. Hunter, H.C. Hensleigh, T.J. Kreeger, G.A. Binczik, N.J. Reindl, U.S. Seal and R.L. Tilson. 1987. *In vitro* capacitation of Siberian tiger spermatozoa. Zoo Biology 6(4):297-304.
- Byers, A.P., A.G. Hunter, U.S. Seal, G.A. Binczik, E.F. Graham, N.J. Reindl and R.L. Tilson. 1989. *In vitro* induction of capacitation of fresh and frozen spermatozoa of the Siberian tiger (*Panthera tigris*). J. Reprod. and Fert. 86:599-607.
- Tilson, R.L., G.A. Binczik and M.W. DonCarlos. 1989. Zoo science or zoo voodoo? The need for a national research coordinator. AAZPA 1988 Ann. Conf. Proc. 352-357.
- Tilson, R.L., G.A. Binczik and M.W. DonCarlos. 1990 (in press). Zoo science vs. zoo voodoo: Integrating research with animal management. In: S. Lumpkin and D. Kleiman (Editors), Wild Mammals in Captivity, Vol.1. Sunderland, MA: Sinauer Associates, Inc.
- Tilson, R.L., K.A. Sweeny, G.A. Binczik and N.J. Reindl. 1988. Buddies and bullies: Social structure of a bachelor group of Przewalski horses. Appl. Anim. Behav. Sci. 21:169-185.

### Popular Publications

- Binczik, G.A. and R.L. Tilson. 1986. Assessing captive tiger cub growth rates. Minnesota Zoo Magazine 1(4):3-4.
- Binczik, G.A. and R.L. Tilson. 1987. "A (lion) by any other name...?" Minnesota Zoo Magazine 2(5):8-9.
- Binczik, G.A. and R.L. Tilson. 1988. Domestic heritage pollutes the Asian "wild" horse. Minnesota Zoo Magazine 3(2):6-7.

### Editorial Positions

- Tiger Beat. September 1987 (Vol. 1, No. 1) to Present. Created and coedit (w. R.L. Tilson) newsletter of the American Association of Zoological Parks and Aquariums Tiger Species Survival Plan.
- Zooschool Journal. August 1987 (Vol. 5) to Present. Coedit (w. K. Traylor-Holzer) journal of student animal behavioral studies conducted at the Minnesota Zoological Garden.

MINNESOTA ZOO  
STRATEGIC PLAN

AUGUST 17, 1989

## PREAMBLE

In June 1987 the Minnesota Zoological Board released its Long Range Plan. The objective of that document was to provide an overall vision of the Minnesota Zoo over the subsequent 5-10 years. Central to the Long Range Plan is its Mission Statement.

"The mission of the Minnesota Zoological Garden is to Strengthen the bond between people and the living earth."

All of the activities of the Minnesota Zoo will be guided by this mission and are directed toward three cornerstones which support the mission; Conservation, Recreation, and Education.

### 1. Conservation

The Conservation Policy adopted by the Board of Directors in April 1989 defines Conservation as: "the management of the biosphere so that it may yield the greatest sustainable benefit to present and future generations of all living organisms."

The Board, in the Long Range Plan observed that: "Underlying [the mission statement] is the firm conviction that humans are partners in the bond with the flora and fauna of this planet. The Minnesota Zoological Garden's exhibit philosophy and animal management criteria proceed naturally from this conviction."

The Conservation Policy reaffirms this conviction. "We acknowledge a responsibility to provide leadership in conserving the biological diversity of our planet and in protecting the wild species living under our stewardship."

### 2. Recreation

Recreation is defined as a means of getting diversion or entertainment. Recreation implies renewal or recreation, and in some definitions is associated with refreshment of the strength and spirits after toil, while in others it is associated with play or diversion. The spirits can be lifted by consolation or encouragement, by the influence of pleasant and exciting experiences, by change, or by the diversion of new surroundings.

Achievement of the Zoo's mission as set out in the Long Range Plan, "requires attracting a broad spectrum of the public to the site. In order to do this, the Minnesota Zoo will offer its visitors an interesting and pleasant recreational experience."

The emphasis on recreation extends into the educational and conservation arenas of the Minnesota Zoo's work. The idea of "Recreational Education" is one uniquely suited to the Zoo setting. Fun and exciting learning experiences provide the medium to convey the conservation messages so important to the Minnesota Zoo.

Each staff member contributes to the quality of the visitor experience at the Minnesota Zoo. Each is a link from the day-to-day operation of the zoo to the fun, excitement and learning of a visitor's trip to the Minnesota Zoo.

### 3. Education

Education is the act or process of providing knowledge, skill or competence. Education also fosters the development of values. The mission of strengthening the bond between people and the living earth requires the Minnesota Zoo to impart information about animals and conservation of the environment and to provide opportunities which shape the values of people with regard to animals and the environment.

The Minnesota Zoo seeks, through its exhibits, graphics, and many organized programs, to educate both the general public coming on zoo visits and a wide range of specific audiences participating in special programs both on and off the zoo site.

The Interpretive Programs goal is to "provide people of all ages with a variety of Zoo learning adventures which help to foster an understanding and appreciation of wildlife."

The Zoo setting provides the potential for unique learning opportunities different in content and presentation from more traditional learning experiences. The Zoo is an ideal place to present conservation messages in the context of experiences with animals themselves. The opportunity to develop the human-animal bond through a variety of zoo experiences is an extremely important element of the Minnesota Zoo's mission.

Education is also extremely important for staff members themselves. Opportunities for professional development in one's own field, and opportunities to learn about the functioning of other areas in the zoo are extremely important to the effective and coordinated operation of the Zoo and ultimately to the quality of the visitor experience.

#### Scope of the Strategic Plan

The Long-Range plan of the Minnesota Zoo calls for the development of a Strategic Plan to direct Minnesota Zoo staff in implementing the Long Range Plan. This document has been formulated by the Minnesota Zoo's management to provide general direction to the staff of the Minnesota Zoo over the next two years. It outlines the goals and priorities in general terms and gives specific directives on tasks to be undertaken by different departments over the next two years.

The management team of the Minnesota Zoo has drawn on a wide variety of resources in developing this plan. The Long Range Plan has provided guidance in developing the more specific objectives outlined in this Strategic Plan. The staff of the Zoo participated in a series of S.P.O.T. (Strengths, Problems, Opportunities, Threats) analysis groups designed to evaluate the Zoo's success in meeting its perceived goals and objectives. Materials on the visitor experience such as current visitor comments, and earlier focus group studies conducted by Diane Sims Page and C.J. Olson Market Research, Inc., were used as background as were other important policy documents such as the Report of the Special Zoo Study Committee On Governance Options for the Minnesota Zoo, The Tuning Study Report, and the Report of the Whale Study Committee. Dr. Peter Ring of the Carlson School of Management of the University of Minnesota facilitated the Strategic Planning Process.

Evaluation of current activities and development of work plans for activities contemplated in the future must be done on the basis of the goals and priorities set forth in this plan.

This plan provides a tool for managers to use in evaluating the effectiveness of their areas in meeting the mission of the Minnesota Zoo. It also allows evaluation of the use of human and financial resources. In many cases the Strategic Plan reaffirms goals, priorities, and activities already in place, while in others it suggests new directions. It is the responsibility of managers to evaluate the use of resources in their departments to determine which ongoing activities meet the goals of the Strategic Plan and to propose new activities in response to the Strategic Plan.

It is a challenge to make these assessments in an atmosphere of limited financial resources. Managers may have to choose between existing programs which do not meet the goals of the Strategic Plan and new programs which clearly support it. By the same token the budget process in years to come will reflect new requests for programs which better serve the goal of strengthening the bond between people and the living earth.

This Strategic Plan is intended to be an evolving document. It will be reevaluated and updated each year to reflect changing priorities, new goals, and fulfilled objectives.

Certain activities or functions at the zoo fit more easily into one of the three cornerstone activities of

Conservation, Education, or Recreation than another, but each should be performed in a way that promotes or does not detract from the achievements in the other two areas.

### Guiding Principles

Certain principles guide all employees of the Minnesota Zoo in their execution of the mission of the Zoo.

Service to visitors is paramount. All staff will treat visitors as they would guests in their own homes. Visitors will come away from their zoo experience having had the opportunity to be entertained, to be educated, and to gain a greater appreciation of the need to conserve the living earth. Staff will take the responsibility for making a pleasant visitor experience.

Care of the Zoo's animal collection must meet the highest standards and these standards cannot be relaxed for any reason. This strong obligation cannot be compromised for any reason. The Long Range Plan states "The Minnesota Zoo's animal management criteria testifies to the bond by meeting the animals' need for health, space, and diet, and promoting reproductive requirements." The Minnesota Zoo's Accreditation by the American Association of Zoological Parks and Aquariums (AAZPA) is predicated on meeting the highest professional standards of animal care.

The enabling legislation of the Minnesota Zoo states: "The Board shall comply with all federal laws and any rules or regulations prescribed by any agency of the federal government, relating to the quarantine, transportation, examination, habitation, care and treatment of wild animals. (85A.02 subd. 9).

Active and healthy animals serve our goal of providing visitors with a quality recreational experience, they enhance our ability to educate the general public about animals in their natural habitats, and they reflect our strong conservation philosophy.

Outstanding stewardship of the beautiful 485 acre site and the physical facilities placed upon it will reflect our conservation ethic, and ensure the viability of the institution in the long term.

An overriding obligation is to those who provide the resources that enable the Minnesota Zoo to operate. In this respect our objective is to operate the zoo according to modern business practices. In those areas where it is realistic to operate on a profit basis our objective will be to run the zoo as profitably as resources permit.

The Minnesota Zoo is a state zoo and it is expected that it will continue to operate with funds provided by the State Legislature. The Report of the Special Committee on Governance Options for the Minnesota Zoo released in January 1986 found that most public zoos in the United States receive substantial government support. This study concluded that substantial state subsidies were essential to the operation of the Minnesota Zoo. Another study found that 38 government owned and operated zoos received an average of 67% government support of their operating budgets (Zootrends Winter 1986-1987).

### The Place of the Minnesota Zoo in Minnesota

The Minnesota Zoo fulfills its special obligation to the citizens of the State of Minnesota by serving as an institution which provides experiences unavailable elsewhere in the state. In this era of increasing concern over the environment, the Minnesota Zoo is uniquely positioned to educate the public about wildlife and conservation issues on the local, national, and international level.

The animal collection provides the centerpiece of a learning resource to Minnesotans, as well as to out-of-state visitors. It represents a wide range of species, giving people a chance to experience local fauna close at hand as well as to gain an appreciation for exotic animals from around the world. The plant collection holds similar potential to demonstrate the floral diversity to be found throughout the globe. The Minnesota Zoo is the only place in Minnesota to experience a naturalistic re-creation of the Tropics, the Tundra, or the Ocean environment.

The Minnesota Zoo has distinctive competencies that set it apart from other agencies and regional resources concerned with the preservation of the natural and historical environment. In contrast to museum experiences zoos provide the opportunity for visitors to view live animals. Visitors to the Minnesota Zoo can observe animal behavior in a naturalistic setting. The experience of observing healthy animals showing activity levels and social behavior typical of their wild counterparts can open new vistas for visitors and build their appreciation of the bond between people and the living earth.

In contrast to the Department of Natural Resources, which focuses on wildlife issues within the state of Minnesota, the mission of the Minnesota Zoo requires that we focus and educate on national and international wildlife issues in addition to those of the state of Minnesota. The makeup of our animal collection is truly international and stops at no political boundaries. Our educational programs and conservation efforts reflect this, and much of our recreational impact comes from the opportunity we provide for the public to observe exotic animals.

As a major Zoo on the national scale, the Minnesota Zoo focuses on a wide range of concerns. In addition to providing an excellent recreational experience, we choose to present our animals in naturalistic contexts, in environments devoted to learning, and in settings that reflect our ongoing commitment to conservation.

#### The Place of the Minnesota Zoo in the Nation and the World

The Minnesota Zoo is a world-class institution, renowned as a leader in conservation, education, and recreation. As such it is a resource to the nation, as is an exceptional theater, orchestra, or university.

The physical facility, the exhibits, the professionalism of the staff, and the beauty and versatility of the site make the Minnesota Zoo stand out prominently among the zoos in the nation.

The exceptional human resources of the Minnesota Zoo are reflected in many awards and honors, and in participation in over a dozen conservation programs of the American Association of Zoological Parks and Aquariums (AAZPA) and the International Union for the Conservation of Nature and Natural Resources (IUCN). The Minnesota Zoo was host to the AAZPA 62nd Annual Conference of Zoological Parks and Aquariums in September 1986. The Minnesota Zoo participates in 7 established Species Survival Programs and in efforts to develop Species Survival Programs for several other species. Minnesota Zoo staff serve on the Ethics Committee, the Species Survival Plan Sub-committee, and the Charter and By-laws Committee of the AAZPA and the Infectious Disease Committee of the American Association of Zoological Veterinarians. In addition staff serve as members of the Captive Breeding Specialist Group of the IUCN and the Minnesota Zoo is represented on the IUCN Cat, Hyena, and Asian Primate Committees. The Minnesota Zoo is home to the International Species Inventory System (ISIS), the AAZPA Coordinator's Office and the Captive Breeding Specialist Group of the IUCN. In addition to having received five awards for educational excellence from the AAZPA, the Education Department of the Minnesota Zoo is accredited by the North Central Association of Colleges and Schools.

Visitor attendance of nearly a million people per year establishes the Minnesota Zoo as a major national zoo ranking 14th in attendance among 140 registered zoos in the United States. The Minnesota Zoo has the highest winter attendance of any zoo in the northern states, including New York's Bronx Zoo and the major zoos of Chicago, Philadelphia, Toronto and Milwaukee.

In sum, the Minnesota Zoo is a high caliber institution whose resources contribute to conservation, education and recreation on the local, national, and international levels. The Minnesota Zoo can make unique contributions at all of these levels by virtue of the resources it possesses in its staff, animal collection, physical facilities, and site.

As outlined in the Long Range Plan, all activities at the Minnesota Zoo will further the Mission of strengthening the bond between people and the living earth. This will be achieved by programs addressing our three major tasks, Conservation, Education, and Recreation.

## STRATEGIC PLAN FOR CONSERVATION, EDUCATION, AND RECREATION

The strategic direction of the Minnesota Zoo and the allocation of resources directed by the Strategic Plan serve three arenas: Conservation, Education, and Recreation. These three arenas provide the programmatic basis for achievement of the Minnesota Zoo's mission of strengthening the bond between people and the living earth. In this section of the Strategic Plan the broader objectives of the Minnesota Zoo in each of these three arenas are outlined in detail.

While primary responsibilities for implementing programs in the three arenas may often rest within a single division of the Minnesota Zoo, those charged with specific responsibilities will be required to consider the resources and staff of the Minnesota Zoo as a whole in planning and implementing specific programs.

### Introduction to Conservation

The Board of the Minnesota Zoo has adopted a Conservation Policy which states: "We acknowledge a responsibility to provide leadership in conserving the biological diversity of our planet and in protecting the wild species living under our stewardship."

This is an appropriate role for the Minnesota Zoo in the State of Minnesota. Development of a diverse and exciting animal collection serves our educational and recreational goals by bringing endangered species, and knowledge of threats to them and their habitats, to the public of Minnesota. The staff of professionals assembled to care for the animal collection possesses unique expertise and interest in working on the captive breeding of endangered species. The diverse animal collection ensures that the focus of Conservation programs at the Minnesota Zoo is inherently worldwide.

Three major issues define the scope of Conservation efforts worldwide and bring focus to the efforts of the Minnesota Zoo.

1. Endangered Species: The decline in numbers of populations and the extinction of species.
2. Habitat Loss: Human-caused destruction or degradation of ecosystems which render natural habitats incapable of supporting some or all of the species originally present.
3. Environmental Pollution: Degradation of the earth's biosphere as a result of human consumption, processing, and disposal of resources.

These three issues are entirely interrelated. For example, species can come to be endangered as a result of both habitat loss and environmental pollution. By the same token, an institution can specialize on one or another of these issues alone. The most direct influence of zoos traditionally lies in the area of endangered species management.

The MZG can impact each of these issues through Direct Actions: those actions which use the resources of the Minnesota Zoo and its staff to directly reduce the threats of a particular environmental issue.

In addition to direct actions the Minnesota Zoo will use its staff and resources to Raise Awareness by providing knowledge to others which makes them aware of Endangered Species, Habitat Loss, and Environmental Pollution issues and the actions that can be taken to help resolve them.

The Conservation Policy outlines the Zoo's action plan for conservation.

"Conservation through PRESERVATION"

"Habitat loss is a major cause of diminishing plant and animal numbers and species extinctions. The Minnesota Zoo will help protect the remaining habitat to the extent possible with available and appropriate resources.

"As a zoo we support the International Union for the Conservation of Nature and Natural Resources (IUCN) policy statement for Captive Breeding--'Habitat protection alone is not sufficient if the expressed goal of the World Conservation Strategy, the maintenance of biotic diversity, is to be achieved. Establishment of self-sustaining captive populations and other supportive intervention will be needed to avoid the loss of many species, especially those at high risk in greatly reduced, highly fragmented, and disturbed habitats. Captive breeding programs need to be established before species are reduced to critically low numbers, and thereafter need to be coordinated internationally according to sound biological principles, with a view to maintaining or reestablishment of viable populations in the wild."

The Conservation Policy also addresses "Conservation through EDUCATION." stressing the Minnesota Zoo's essential role in raising awareness.

"The Minnesota Zoo is an educational institution that is committed to teaching our visitors about the relationships between humankind and the natural world. Education will expand the public's awareness of historical, current and future environmental issues; will teach our visitors the value of sharing this living earth equally with all species; and will suggest to our visitors how they personally can effect a change by becoming involved with conservation programs of their choice."

Also in the realm of raising awareness is the Minnesota Zoo's recreational mission. The Conservation Policy addresses Conservation through RECREATION.

"We support a RE-CREATION or rejuvenation of our visitors by the quality of their experience at the Minnesota Zoo. Through aesthetically rewarding displays of plants and animals we elevate the importance of each species to each of our visitors and thus strengthen the efforts of society to better preserve and conserve our living earth. Recreation will be structured so that the zoo experience is a fun, exciting, and creative process that strengthens the bond between people and the living earth."

General Conservation Commitment

This section outlines the Conservation actions to be taken by the Minnesota Zoo over the next two years.

Our exhibits will reflect our commitment to action on endangered species, habitat loss and environmental pollution. Development of the animal collection will reflect our primary commitment to endangered species. Design of exhibits and exhibit graphics will have the objective of educating the public on elements of the endangered species, habitat loss, and environmental pollution concerns outlined here. Entire exhibits will be developed specifically to drive home conservation messages. By January 1990 an Exhibits Project Team will be formed to examine our exhibits and graphics from this viewpoint. They will develop a strategy and timetables for enhancement of existing exhibits and graphics to convey endangered species, habitat loss, and environmental pollution messages. They will also develop ideas for conservation exhibits on each trail.

A Conservation Division will be formed to coordinate our direct efforts. This Division will direct endangered species management at the Minnesota Zoo and will develop the conservation content of the educational and recreational activities. This division will explore the idea of a conservation endowment or institute to support

conservation projects at a local, national and international level. The conservation division will examine our relationships with other conservation entities and determine where our distinctive competencies can be employed and where it will be appropriate to take leadership or support roles.

In developing the role of the Conservation Division there will be an assessment of the expertise available throughout the Minnesota Zoo in biology, communications, policy development, and other skills needed to contribute to efforts in conservation. A major objective of the newly formed Conservation division will be to develop and formalize relationships with the University of Minnesota and other local colleges and facilities. One objective will be for the Minnesota Zoo to provide a resource for research, internships and classes at the University level. Another objective will be for Minnesota Zoo staff to develop connections to these and other programs both as adjunct faculty and as students. By the same token, connections and affiliations with institutions throughout the country and abroad will be considered and encouraged as this Division takes an effective role in conservation efforts.

The Minnesota Zoo will promote its conservation actions. Public Relations staff and the Board marketing committee will specify how the reputation of the Minnesota Zoo as a model of conservation leadership can be effectively communicated at the local, national, and international levels. Minnesota Zoo publications will carry the conservation message.

Each issue of the Zoo Magazine will emphasize conservation efforts within the zoo. The magazine will also carry news items of a more general nature on issues related to endangered species, habitat loss, and environmental pollution. There will be exploration of the idea of including material from other national publications in the magazine to strengthen its conservation impact.

In general, the Minnesota Zoo will consider its role in producing or collaborating with others in production of video, audio, or print materials designed to increase the awareness of the public or particular interest groups on issues related to conservation.

Educational programs will carry conservation messages. One objective will be to provide visitors, and students exposed to educational programming on and off-site, with constructive messages focusing on the solutions to environmental problems as much as on the problems themselves.

#### Endangered Species Conservation.

The Minnesota Zoo will provide leadership and participation in the development and maintenance of Species Survival Plans and work toward achieving the following objectives:

1. Species Survival Plans. There will be continued participation on SSP committees. This participation will be expanded to bring membership on as many SSP committee as possible either with new species brought to the zoo or by helping to develop species survival plans for species already here. When possible the Minnesota Zoo will initiate studbook preparation for a new SSP species each year and there will be continued research on captive reproduction designed to meet SSP goals.

The Conservation Division will develop specific recommendations on where resources and expertise can be brought to bear in developing and maintaining an effective role in endangered species conservation. This will include evaluation of research directions. The report will also detail potential sources of funding for such efforts.

2. Reintroduction of Endangered Species. Conservation leadership at the MZG will explore how the Minnesota Zoo can contribute to efforts to reintroduce endangered species to the wild. The objective will be to build on and enlarge the results obtained with the trumpeter swan program. Other species of local, national and international interest which may be candidates for reintroduction or translocation will be identified.

## Habitat Conservation

The Minnesota Zoo will develop mutually supportive relationships with other organizations directly involved in habitat preservation. By June 1990 the Minnesota Zoo will have established ties with The Nature Conservancy, The World Wildlife Fund, Wildlife Conservation International, the International Union for the Conservation of Nature, and other conservation groups playing powerful roles in habitat preservation.

The Minnesota Zoo will become directly involved both as a participant and a supporter of specific conservation programs aimed at habitat preservation for endangered species both abroad and at the local level. By December 1989, Minnesota Zoo staff will have prepared an action plan detailing the types of programs the zoo can become involved with. This plan will specify areas and species of particular interest to the MZG. It will make recommendations on where the MZG can make a genuine contribution to such in situ programs. It will explore the idea of "sister reserve" relationships with parks or wildlife reserves in other countries and will specify how such efforts will enhance our animal collection, contribute to our recreational and educational goals and be marketed to the general public and conservation constituency. It will detail how staff resources and financial resources can be brought to bear on habitat loss problems off the MZG site.

*Indian  
rhino*

Staff expertise and leadership in the biological science, animal health, conservation policy and other areas will be made available where appropriate to further efforts toward habitat preservation. Financial resources will be raised, where appropriate, to support such efforts.

## Environmental Pollution

The Minnesota Zoo will become recognized as a community leader and a statewide resource in environmental responsibility. This leadership will be based on setting a clear example and providing educational opportunities in this area.

The Recycling Committee will work to reduce production of non-recyclables from all areas of the zoo, including visitor refuse. A program for accomplishing this will be fully implemented by the end of 1989. This will involve exploration of and use of alternative products as exemplified by the efforts of the Dairy Queen management. Production of hazardous wastes will be reduced where possible and hazardous wastes will be disposed of properly.

An Energy Conservation Project team will be established to review the energy conservation measures in effect with the objective of ongoing exploration of ways to reduce energy use. A report will be completed by June 1990. The energy conservation methods in place now will be highlighted and the feasibility of reductions in overall energy use will be explored.

Among the items evaluated will be the fate of the existing solar collection equipment and the practicality of developing new solar capacity. The Energy Management and Conservation system will be reevaluated biennially to take advantage of new developments in the energy field and the initiatives of private firms to participate in helping reduce energy use at the Minnesota Zoo in exchange for a percentage of the savings will be encouraged.

The Exhibits Project Team will consider the interpretive opportunities available for providing information on environmental pollution to the public.

Use of plant materials around the zoo will emphasize the role of plants in environmental enhancement as exemplified in the My Backyard area of the Discovery Trail.

The Minnesota Zoo will teach the public what actions they can take by example and by taking a leadership role in the community. Education on environmental pollution issues such as acid rain and toxic waste will be provided. Community involvement in recycling drives, planting efforts and other efforts to curtail environmental pollution on the local scale will be encouraged.

## Summary of Conservation

All of the actions and objectives specified in this Conservation section relate back to the MZG's stated mission of strengthening the bond between people and the living earth. Our direct actions will contribute to the preservation of natural habitats and endangered species and to the reduction of environmental pollution. Our example and our teaching will strengthen the commitment of the citizens of Minnesota to environmental quality and give them the means to help shape our environmental destiny so that they may continue to enjoy the bond between people and the living earth.

## Introduction to Recreation

The second major focus of the Minnesota Zoo is on Recreation. The Long Range Plan of the Minnesota Zoo states that "The Minnesota Zoo will welcome the visitor and make the Zoo the fun, recreational experience the public have a right to expect." A primary objective of the Minnesota Zoo's programs must be to foster a recreation or rejuvenation of our visitors by the quality of their experience at the Minnesota Zoo.

The Board and Management of the Minnesota Zoo view the Zoo's physical assets as providing a basis to compete for visitors from within Minnesota, and from out-of-state, in the recreation market. Unlike major sporting teams, or seasonal recreational businesses, the Minnesota Zoo operates on a 12-month basis and will capitalize on this opportunity to enhance attendance and increase revenues.

The success of the Minnesota zoo in the area of recreation will be measured and defined by three elements, revenue generation, increased attendance, and year-round viability.

Revenue generation is a measure of the success of recreational programs. A major objective is to increase the net revenues of the Minnesota Zoo. The contribution to the Zoo's operating budget generated from non-state revenues should increase gradually over the next five years. The revenue generating centers of the zoo such as the gift stores and the monorail will produce a profit.

Attendance at the Minnesota Zoo will grow commensurate with exhibits growth and continued development of the facility and zoo programs. This growth will be spurred on by strong marketing aimed at new members and repeat visitors and through an ambitious program of capital development.

Year-round viability is a major objective of the Minnesota Zoo. Activities at all times of the year must support and promote the use of the facility during other seasons. The objective is to increase attendance at all times of the year, taking advantage of the strength of the Minnesota Zoo as a four-season resource.

These three criteria are measures of the success of the Minnesota Zoo as a recreational facility. The excellent recreational value at the Zoo draws the public to the facility to access the benefits of conservation and educational efforts. Without visitors the Minnesota Zoo cannot meet its mission statement.

## Specific Recreational Objectives

Over the next two years the following objectives will guide recreational programming at the Minnesota Zoo:

One major goal is to produce a recreation policy for the Minnesota Zoo. This policy, developed along the lines of the Conservation Policy, will further define recreation using the Long Range Plan as a basis and provide more formal means for evaluating our success as a recreational institution. Development of this policy will involve staff participation with the Marketing Committee of the Board. This policy should be in place by October 1989.

Each staff member of the Minnesota Zoo will work to become qualified to represent the Minnesota Zoo to the general public. A Staff/Visitor Project Team will explore the roles that all staff members play in creating a quality visitor experience at the Minnesota Zoo. A major objective for this team and for all staff is to understand that each staff member is a link to the success of the Zoo and to the quality of the visitor experience. The

presence of courteous, friendly, and knowledgeable staff is an important element of a comfortable visitor experience. This project team will complete its work by July 1, 1990.

All staff will have the opportunity to receive training in working with the public. The objective of this training is to make all staff more comfortable and effective as representatives of the Minnesota Zoo. The Staff/Visitor Project Team will explore how this training and experience can be provided and explore how to instill the conviction in all staff that such training is essential to quality performance of their jobs at the Minnesota Zoo.

A major objective of management in the next two years will be to increase the awareness of all staff of the day-to-day routines, policies, skills, and philosophies of areas outside their own particular work place. The Staff/Visitor Project Team will determine how to give all staff the opportunity to become more knowledgeable about the Zoo. One step to staff comfort with their role as hosts to the public is general knowledge about the Zoo and its workings, and a clear sense of where to direct people to get a variety of specific information visitors might request. With the diverse range of job responsibilities at the Minnesota Zoo, it is a challenge to be aware of and knowledgeable about all the programs and pieces that contribute to the Zoo's successful operation.

The recreational value of walking the trails will be increased. A Recreation Project Team will be formed by October 1989 to produce a plan of attack to make trails more fun. They will evaluate all aspects of each trail including such items as graphics, entry and exits, and exhibit animals. The Recreation Project Team will also evaluate visitor amenities for user friendliness.

By January 1990 this group will have formulated a plan outlining how the recreational value of the trails will be reviewed and which trails will be considered first. They will present a timetable for when recommendations will be presented on the first trail considered. Each year five issues related to visitor comfort will be identified and addressed in the Repair, Replacement & Betterment budget. At least twenty percent of this budget will be allocated to improvements of visitor amenities. Bathrooms, picnic and lunch areas, and signage will be among the first items considered.

A Special Events Project Team will evaluate all special events currently held at the Minnesota Zoo in terms of their contribution to increased revenue and increasing attendance and with regard to year round use of the zoo. This group will evaluate each program tentatively scheduled after January 1, 1990 relative to the recreation goals and those of conservation and education. No existing program will be reinstated unless it has been clearly designed with the three factors of revenue generation, increased attendance, and year-round use of the facility as well as compatibility with the physical plant of the zoo, in mind.

A Recreation/Education Balance Project Team will work with staff of interpretive areas such as Discovery Trail to evaluate their programs with respect to meeting the major challenge of providing a balance between their educational and recreational missions. This team will issue preliminary recommendations by January 1990. They will also evaluate the Zoo Ark program and its scheduling and itinerary in the next six months with the goal of balancing its effectiveness as a promotional tool for the Minnesota Zoo with its conservation education mission.

Increased revenue and attendance, and year-round viability are measures of the success of our recreational programs. Success as a recreational facility is a major goal which stands alone. Success in providing a quality recreational experience also enhances our ability to meet our goals in the areas of Conservation and Education, since it means more visitors will be impacted by the messages of those programs and more resources will be available to the zoo as a whole as we strive to fulfill our mission of strengthening the bond between people and the living earth.

#### Introduction to Education

Educational efforts at the Minnesota Zoo serve three major audiences, the general public (usually family groups), organized school groups, and the Minnesota Zoo staff themselves. These three constituencies experience different, although overlapping facets of the Minnesota Zoo's programs. All three have the opportunity to experience the trails, with their exhibits, animals, experiences, handouts, and graphics, and the shows and animal

demonstrations with their narrations and opportunities to view the characteristics of unique animals. The experience of the general public usually stops here although there are a variety of continuing education opportunities and guided tours available to the general public.

Added to the Zoo experience provided to the general public, most school groups receive an orientation to the zoo and have the opportunity to take "Learning Excursions" in the form of guided or self-guided tours during their zoo visit. Schools receive curriculum materials from the Zoo which carry our effectiveness in meeting the Zoo mission off-site and prepare them for their visit to the zoo. They also have the opportunity to receive a visit from Zoo Ark, the zoo's travelling education and marketing program.

Staff also have the opportunity to experience the zoo on a daily basis and to participate in continuing education programs. Their educational needs are different from those of school groups or the general public. Staff development involves programs to increase individual effectiveness in specific areas of expertise, programs to increase the effectiveness of communication and cooperation in the immense group effort required to keep the day-to-day operations of the Zoo running smoothly, and programs to provide all staff with the opportunity to be knowledgeable about the Minnesota Zoo and all its diverse activities.

The job of education involves many areas of the zoo. Staff in the Interpretive and Education areas are specifically responsible for structuring the experiences of school groups and the general public, but all staff share the burden of making the zoo experience a successful one. All staff are responsible for a general knowledge of the zoo and its programs and philosophies which can be passed on to visitors. Staff in the personnel or staff services area are specifically responsible for initiation of staff development opportunities but, again, all staff share the responsibility to develop and take full advantage of such opportunities and to work to increase the opportunities for interchange and learning to take place between different areas of the zoo.

#### Programs for the General Public and Schools

In evaluating and improving the Education Programs of the Minnesota Zoo three factors will be considered; the audience to be reached, the messages to be conveyed and the means of conveying those messages.

The main focus of the Minnesota Zoo's educational endeavors must be to provide quality programs to the general public and school groups. Many such programs are in place and have gained strong reputations as innovative and exciting educational opportunities for many audiences.

The work of the Interpretive programs must support the Minnesota State Department of Education's priorities on Environmental Education. Staff must work with the Department of Education's Environmental Education Specialist to ensure that the Zoo's Kindergarten through Twelfth grade programs reflect the State Environmental Education mandates.

Interpretive Programs must work to increase the opportunities available for school visits to the Minnesota Zoo. The Department of Education has placed an emphasis on reduced "seat-time" in classrooms. The programs at the Minnesota Zoo must provide a "living classroom" to meet this state mandate.

Interpretive programs must continue to strengthen its work in developing classroom curriculum materials that convey the conservation message of the Minnesota Zoo and serve to draw school groups to the Minnesota Zoo for further learning experiences.

The Board has not established an Education Policy. A Board priority must be to work with staff to establish such a policy. This policy would be designed to define the goals of the education program at the Minnesota Zoo so that existing and proposed programs can be evaluated for their fit with that policy and with the mission of the Zoo. The Education policy, along with the Conservation and Recreation policies will complete a clear set of philosophical and policy guidelines from which staff can shape the Minnesota Zoo's programs in the years to come.

The message of the zoo will be considered carefully. The educational programs must convey the conservation message. The areas defined in the conservation section of the Strategic Plan will provide a base for restructuring the content of Minnesota Zoo educational materials where necessary. This conservation education message will be presented, to the greatest extent possible, in a recreational manner.

Our educational programs must serve their students by presenting high quality experiences and materials. They must also serve the broader goals of the Minnesota Zoo. They do this by reaching a wide audience and including elements of marketing for the zoo. A program taking place outside the zoo must leave its audience with the desire to continue their experience with a visit to the zoo. Education can promote the recreational value of the zoo at the same time it promotes the conservation message and the opportunity to learn more at the Zoo itself. As each program at the Zoo supports our three missions of Conservation, Recreation and Education, the Minnesota Zoo will gain strength and effectiveness in meeting our overall mission of strengthening the bond between people and the living earth.

#### Specific Objectives

The primary objectives for the Minnesota Zoo's public education programs are to maximize the educational experiences provided on the Zoo site for general public and school groups and to increase the effectiveness of the interpretive materials developed for classroom use by teachers outside the zoo. Outreach materials, including curricula and Zoo Ark must be designed to draw people to the Zoo itself. The Minnesota Zoo facility is where we have the best, most exciting opportunity to convey the message of conservation education.

A major objective is to maintain the high standards of education that qualify the Minnesota Zoo for yearly recertification by the North Central Association of Colleges and Schools.

The content of the educational programs of the Minnesota Zoo will be directed by the Minnesota Zoo's conservation objectives. The primary focus of the education program will be endangered species, captive breeding, and the Minnesota Zoo's unique animal populations and their habitat requirements. Secondary focus will be on the issues of environmental pollution and habitat loss.

A Continuing Education Project Team will evaluate existing continuing education programs to assess which programs are consistent with this plan. Their report, prepared by September 1990, will specify which programs should continue and provide suggestions of new programs and modifications of program content to insure that they are consistent with the Conservation education objectives set forth above.

An Educational Materials Project Team will evaluate and report by June 30, 1990 on the feasibility of developing commercially marketable written, video and audio materials on the Minnesota Zoo's collection or activities. These materials would be designed primarily for Minnesota's classroom audiences, with the objective of preparing students for educational experiences during visits to the zoo. In those areas where the Minnesota Zoo has assumed a leadership position in Species Survival Planning, the project team will consider the feasibility of producing materials designed to reach wider professional audiences.

In the course of their work, the Exhibits Project Team will develop a plan for ensuring that current and proposed graphics and signage at the Minnesota Zoo carry appropriate conservation messages consistent with the educational objectives set forth above.

Consistent with the objectives described in the recreational section of this plan there will be reevaluation, by the Recreation/Education Balance Project Team, of some interpretive programs such as Zoolab and the Discovery Center for the relative importance of these programs as recreational versus educational experiences. Also the marketing potential of the Zoo Ark program will be evaluated to ensure that the promotional opportunities provided by this unique program are maximized.

## Objectives for Staff Development

The primary objectives for the Minnesota Zoo's staff education programs are to maximize staff development opportunities, to increase the staff's understanding of the operations of the Minnesota Zoo as a whole, and to improve the entire staff's ability to provide visitors to the Minnesota Zoo with an understanding of how the Minnesota Zoo serves to strengthen the bond between people and the living earth.

An Orientation Project Team will study how new employees are introduced to the goals and objectives of the Minnesota Zoo. They will make recommendations on how to familiarize new employees with the broad range of activities at the Zoo, so those employees can enter their new jobs with a strong sense of the diversity, strength and unity represented in the Minnesota Zoo's success as an institution. Preliminary recommendations will be made by January 1990.

This project team will also address the same issues from the standpoint of staff already employed. They will develop recommendations for increasing interchange between work areas and for creating opportunities for staff in different areas to become familiar with the work of others.

A Staff Amenities Project Team will examine staff amenities at the Minnesota Zoo. They will determine areas where staff conveniences are inadequate and make recommendations as to how to address issues of concern. This team will make a preliminary report in December 1989 and continue work to follow through on the recommendations.

All supervisors will work to encourage training at all levels that will increase the ability of their employees to meet the goals and objectives of the Strategic Plan. The Strategic Plan will be used as a tool in conducting performance appraisals. It is expected that the jobs people do at the Minnesota Zoo will be clearly consistent with the goals and objective set forth in the Strategic Plan.

## MAJOR INITIATIVES

In this section we outline major initiatives underway or proposed at the MZG. Each of these initiatives will be designed to contribute to the Zoo's Mission of strengthening the bond between people and the living earth and will be realized in a manner supporting our emphasis on Conservation, Education, and Recreation.

### Major Exhibit Expansion

The Minnesota Zoo is currently in the midst of an intensive period of exhibit planning and construction. In addition to the recently completed Koala exhibit, five major capital projects are in various stages of planning. These are the Coral Reef/Shark Exhibit, the Dolphinarium, the Bird Show Amphitheater, the Lower Level Renovation, and the Arctic Complex.

The planning for each of these exhibits or facilities must take into account the Conservation, Education, and Recreation goals of the Minnesota Zoo. In the conservation arena exhibits will be designed and stocked in a manner consistent with our conservation ethic. Animals will be housed in naturalistic settings which evoke the animals' native habitats and thoroughly provide for the husbandry needs of the animals. Exhibits themselves and the interpretive materials, or narrations supporting them, will focus on conservation issues of endangered species, habitat loss, and environmental pollution. Animals chosen for display will be acquired or collected by means within the applicable legal standards. Where legal standards are not established, the Minnesota Zoo will be aware of conservation issues relevant to acquisition of specific animals and will act in a manner consistent with the Minnesota Zoo's conservation focus. When possible, endangered animals in need of captive propagation will be selected for exhibit display.

The Minnesota Zoo's exhibits are directly tied to educational programs. Curriculum material distributed to schools will tie in with the exhibit experience at the zoo. By the same token, education staff will form part of

the team evaluating the style and content of graphic and other interpretive material at new exhibits. The exhibit messages will be evaluated for their effectiveness in educating all audiences of the general public.

New exhibits will provide quality recreational experiences. They will be designed to be marketable and to have the impact of drawing people to the zoo for repeated visits. One of our objectives, which supports the goal of increasing revenue, is to increase the length of time each zoo visitor stays at the zoo. To this end, individual exhibits will be designed to hold people's attention for long periods on each visit. Where possible exhibits will be designed to enhance the year-round excellence of the Minnesota Zoo as a recreational attraction.

#### Coral Reef and Shark Exhibit

Work will go ahead on the Coral Reef and Shark exhibit to be constructed in the Tropics building. Construction will begin in October 1989 and the exhibit will be completed by Spring 1991. Specific tasks to be accomplished are as follows:

A Coral Reef Graphics Project Team will work with the Project Manager and the Portico Group Architects to complete development of a graphics and interpretive package for the Coral Reef and Shark exhibit by early 1990. This will be developed with an eye to meeting the conservation, recreation, and education criteria outlined in this plan.

Biological Programs staff will develop strategy and protocols for fish acquisition and present a plan for this to the General Director by early 1990. This plan will detail where, when, and how the fish are to be acquired, transported, and introduced into the exhibit and will be substantiated by information from other Aquaria stocking such exhibits.

Construction Project Teams will be formed as needed to coordinate the Minnesota Zoo's response to construction in the Tropics building. Primary responsibility will be to direct animal moves in and out of the building and to coordinate with and advise public relations efforts aimed at ameliorating the effects of closure or diminution of the Tropics experience on visitor attendance and satisfaction.

#### Dolphinarium

Work on the Dolphinarium Project will proceed with a tentative starting date for construction of Fall 1990. This would lead to a possible opening in the Spring of 1993.

By August 1989, management will finalize plans for the placement of the Minnesota Zoo's dolphins in another facility during the winter months before construction begins and then for the duration of construction (October 1990-January 1993). They will also investigate and initiate the procurement of additional bottlenose dolphins and have a finalized plan in place by summer 1990, or before construction proceeds on the dolphinarium. This plan will detail how the Minnesota Zoo will comply with the provisions of the Marine Mammal Protection Act, and provide the foundation for the necessary permit applications.

#### Bird Show Amphitheater

The Bird Show Amphitheater will provide an arena for production of the Minnesota Zoo's "World of Birds Show." Work on this project awaits capital funding and final design of this facility. At the time when design proceeds, staff will work with architects to ensure that the facility meets husbandry and visitor comfort needs and provides an exciting arena for the World of Birds Show.

#### Lower Level Renovation

The Lower level renovation will be undertaken in such a manner as to further the recreational mission of the

zoo and to lead visitors to explore the educational and conservation resources available. Renovations of the gift store will be carried out to reflect sound retail principles. When work proceeds there will be an effort to reduce the impact of construction in the major admissions and gathering area of the zoo on the day-to-day visitor experience.

#### Arctic Exhibit

When the Board of Directors approves funds for design of the Arctic complex the staff of the Minnesota Zoo will proceed with site selection, and design of the facility.

#### Capital Campaign

The Board of the Minnesota Zoo has initiated work on a capital campaign. The primary purpose of this campaign is to raise money to fund the Zoo's major capital expansion. A secondary goal is to establish the MZG's standing in the philanthropic community so the community is aware of the Minnesota Zoo's goals as outlined in this document and the Long Range Plan, and can be called on to support the goals of this and subsequent Strategic Plans in the future.

#### Land-Use Plan and Master Plan

The original Master Plan for the Minnesota Zoo was developed in 1971. It is time to take another detailed look at the future of the Minnesota Zoo in the context of the 1990's.

The Buildings and Grounds Committee of the Board has initiated the process of developing a Land-Use plan. This plan is intended to evaluate the Minnesota Zoo site in detail and to make general recommendations as to how different portions of the Zoo property should be developed. For example, the plan would designate areas suitable for future exhibit development, areas available for other uses (eg. more support facilities), and areas to be left undeveloped.

This plan will be developed in the context of the Long Range Plan and of this Strategic Plan. The process will involve extensive input from staff and board members.

The Land-Use planning process will be the first, most general step of a more detailed Master Planning process. This will involve a comprehensive study of the directions the Zoo will take as it moves into the 21st century. The completed Master Plan will contain guidelines and priorities for future exhibit development and other uses of the site and it will spell out future directions for all programs at the zoo.

#### Horticultural Master Plan and Greening of the Zoo.

The Long Range Plan called for a "Greening of the Zoo." Toward this end a Horticultural Master Plan will be developed to examine present and future planting at the Minnesota Zoo and create a plan and guidelines for enhancement of the Zoo's plantings. In this plan the exhibitry of endangered plants will be considered as will the possibilities for labelling and increasing the public's awareness of all the plants on the Minnesota Zoo site.

#### Physical Plant Improvements

There will be an ongoing commitment to maintaining and improving the physical plant of the Minnesota Zoo. Part of this effort involves improved security and safety. A major component of this effort involves staff awareness. It is the duty of each staff member to be aware of and to take precautions against hazards in the workplace and also to be responsible for the maintenance, and vigilance required to keep the facility secure and safe. Work will proceed with plans for construction of an improved perimeter fence for the zoo.

An architectural study is underway to examine the physical plant of the Minnesota Zoo and develop recommendations for maintenance plans and to anticipate maintenance issues likely to arise in the future.

The Buildings and Grounds Committee has approved a set of basic maintenance standards for the Minnesota Zoo. It is the responsibility of each staff member to be aware of these standards and to do their part to ensure that they are followed. Each individual at the Zoo should feel a responsibility for maintenance of the facility and not hesitate to notify the maintenance staff of any real or apparent problem.

The Operations Division will work to develop computerized maintenance and replacement schedules to encompass all the operational aspects of the Minnesota Zoo. The Division will develop a vehicle replacement plan, a computerized work service order system, a centralized physical plant maintenance schedule and inventory system, and graphics and exhibits maintenance schedules.

### Major Marketing Program

Marketing plays a crucial role in the success of the Minnesota Zoo. The recreation goals outlined in this Strategic Plan emphasized increased attendance, increased revenue, and increased viability of the Minnesota Zoo as a year-round facility. The success of the Minnesota Zoo in the recreational area contributes to success in the education and conservation arenas. All three arenas are extremely important to meeting the Zoo's mission of strengthening the bond between people and the living earth.

The quality of the visitor experience at the Minnesota Zoo is probably the most important marketing tool available. This is another reason why the commitment of staff to treat visitors as they would guests in their own homes is so important.

A strong marketing program builds on the success of the facility in drawing more new and repeat visitors. Crucial to success of the marketing program is periodic gathering of information about the visitors who do come to the zoo and about the membership of the zoo.

In the next year marketing research at the zoo will be expanded. A program of visitor surveys and research will identify who the Minnesota Zoo is attracting and lead to modifications of the marketing strategy to reflect research recommendations.

The membership of the Zoo will be surveyed in the next year with the goal of finding out similar information. This information will be used to determine how to increase membership renewals and how to broaden the excellent base of membership the Minnesota Zoo already has.

### SUMMARY

This Strategic Plan sets forth an overall direction for the Minnesota Zoo staff over the next two years. This direction is based on the Mission Statement of the Zoo and on the Long Range Plan and centers on the three elements of Conservation, Recreation and Education.

How the goals and objectives of the Strategic Plan are accomplished is left to the Managers, Supervisors, and Staff of the Minnesota Zoo. Each employee of the Zoo and the division and area they work in will be guided by this plan. The Strategic Plan will guide resource allocation, divisional goal setting, and individual goal setting at the Minnesota Zoo and it will form the basis of performance evaluation at the institutional, divisional, and individual levels.

The Strategic Plan is a living document which sets firm goals but is not cast in stone. It will be reevaluated and modified yearly to meet new challenges and changes in the Zoo's internal or external environments.

## Summary Of Project Teams

Name	Tasks	Timetables	Leader
1. Exhibits	Study effectiveness of conservation message in exhibits.	start January 1990	R. Tilson
2. Energy Conservation	Explore Energy Conservation measures for facility.	complete June 1990	D. Buske
3. Staff/Visitor	Explore role of staff in creating quality visitor experience.	complete by July 1990	K. Jensen
4. Recreation	Study how to increase the recreational value of the trails.	start by October 1989	G.Heinz
5. Special events	Evaluate special events relative to recreation objectives.	implement recommendations by January 1, 1990	K. Jensen
6. Recreation/ Education Balance	Look at Discovery Trail/ ZooArk to assess how to balance the goals of Education and Recreation.	recommendations by January 1990	P. Wolff
7. Continuing Education	Evaluate these programs for consistency with education objectives.	recommendations by September 1990	T. Williams
8. Educational Materials	Explore development of commercially marketable educational materials.	report by June 30, 1990	T. Williams
9. Orientation	Study how to better orient new and continuing employees to the range of activities at the Zoo.	preliminary recommendations January 1990	G. Heinz
10. Staff Amenities	Consider possible improvements to staff amenities.	preliminary report December 1989	P. Thomas
11. Coral Reef Graphics	Work with architects to develop graphics for the new exhibit.	complete by early 1990	P. Thomas/ T. Williams
12. Construction	Coordinate response to construction. Animal management concerns.	ongoing	P. Thomas
13. Construction	Coordinate response to construction. Visitor experience concerns.	ongoing	M. Dowse

27 March, 1990

Re: Record-keeping system utilized for animals not registered with ISIS.

1 - Fish and Invertebrates accessions and dispositions are written in bound log books just as for ISIS animals.

2 - Most of our fish and invertebrates are entered in groups with one number for each species in a shipment. Data for them is then entered and maintained in dBase computer files. An in-house computer program allows us to accession and deaccession individuals from groups and keep a running inventory.

3 - As with our ISIS animals, management and behavioral data for the Fish and Invertebrates is entered in another in-house dBase computer program and can be sorted and retrieved in several ways.

4 - A paper record kept by the Aquarium Zoologist and the Zoolab Zoologist keeps a regular census on paper.

- A few Bird, Mammal and Reptile species are kept in groups where the individuals are not given accession numbers (Prairie dogs, fruit bats Artibeus jamaicensis, Domestic chickens, leopard geckos. These are entered in A.R.K.S. under their group category.

Donna Sandon

*Donna Sandon*  
Conservation Registrar

In comparing the Preliminary Fish & Invertebrate inventories with the total, it appears that about 64% of our total collection is in A.R.K.S.

*Donna*

*Hi Denny* (for the A.R.K.S. Report)  
Here is the most current inventory of Birds, Mammals, Amphibians & Reptiles from A.R.K.S.  
Also included is the PRELIMINARY 1989 Fish & Invertebrate inventory. Donna

## STATE OF MINNESOTA

SF-00008-04

## OFFICE INFORMATION MEMO

		DATE 3-29-90	TIME
TO Ginny	LOCATION		
FROM Jeff	LOCATION		
PHONE NO. ( )	MESSAGE TAKEN BY		

- |                                 |  |  |
|---------------------------------|--|--|
| <input type="checkbox"/> Called | <input type="checkbox"/> Please call     | <input type="checkbox"/> Was here to see you |
| <input type="checkbox"/> Urgent | <input type="checkbox"/> Will call again | <input type="checkbox"/> Returned your call  |

## ACTION

- |  |   |  |
|--|---|--|
| <input checked="" type="checkbox"/> As we discussed  | <input type="checkbox"/> For your information | <input type="checkbox"/> Per voice mail                        |
| <input checked="" type="checkbox"/> As you requested | <input type="checkbox"/> For your approval    | <input type="checkbox"/> Take appropriate action               |
| <input type="checkbox"/> Review and see me           | <input type="checkbox"/> For signature        | <input type="checkbox"/> Prepare reply for my sig.             |
| <input type="checkbox"/> Review and return           | <input type="checkbox"/> Notify staff         | <input type="checkbox"/> Reply and send me copy                |
|  |   | <input type="checkbox"/> File <input type="checkbox"/> Dispose |

## PHOTOCOPY

- |  |                                      |
|--|--------------------------------------|
| <input type="checkbox"/> One side only | <input type="checkbox"/> Collate     |
| <input type="checkbox"/> Head to head  | <input type="checkbox"/> Staple      |
| <input type="checkbox"/> Head to foot  | <input type="checkbox"/> Other _____ |
- \_\_\_\_\_ No. of copies  
\_\_\_\_\_ Date needed

## TYPING

- |                                       |  |
|---------------------------------------|--|
| <input type="checkbox"/> Rough draft  | <input type="checkbox"/> Final copy    |
| <input type="checkbox"/> Single space | <input type="checkbox"/> Memo          |
| <input type="checkbox"/> Double space | <input type="checkbox"/> Letterhead    |
| <input type="checkbox"/> Rush         | <input type="checkbox"/> Carbons _____ |
- \_\_\_\_\_ Date needed

## REMARKS/MESSAGES

 Over

Minnesota Zoo  
FY 90  
Staff Development Estimate

OBJECT 22  
Out State Travel Budget \$ 86,471.00

Less  
Budgets without Staff Dev. Exp.

Capital Campaign	10000
Annual Fund	5000
Amphitheatre	5100
Director's Office	4700
Conservation Projects	2172

Total Deduction (\$ 26,972.00)

Net \$ 59,499.00  
X .6

Assumption:  
60 % of outstate travel relates to staff development \$ 35,699.40

4,300  
39,999.40

Personnel's trng.  
budget

Minnesota Zoological Garden  
 Estimated Cash Receipts and Cash Disbursements  
 For the Year Ending June 30, 1990

	Total	Operations	Gift Store	Monorail	Supporting Funds
	-----	-----	-----	-----	-----
Estimated operating revenues:					
Net sales	\$ 2,244,007		\$ 789,862	\$ 388,866	\$ 1,065,278
Other	651,162				651,162
	-----	-----	-----	-----	-----
Total operating revenues	2,895,168		789,862	388,866	1,716,440
Less cost of goods sold	395,031		395,031		
	-----	-----	-----	-----	-----
Estimated gross margin	2,500,137		394,831	388,866	1,716,440
	-----	-----	-----	-----	-----
Estimated operating expenses:					
Salaries and fringe benefits	6,018,422	4,984,842	171,524	297,797	564,259
Supplies and materials	1,218,584	845,737	6,000	38,600	328,247
Utilities	697,900	675,000	0	22,000	900
Purchased services	875,850	487,929	2,000	7,550	378,371
Other expenses	863,205	522,680	17,232	8,801	314,491
	-----	-----	-----	-----	-----
Total operating expenses	9,673,960	7,516,188	196,756	374,748	1,586,268
	-----	-----	-----	-----	-----
Estimated operating income (loss)	(7,173,823)	(7,516,188)	198,075	14,118	130,172
	-----	-----	-----	-----	-----
Estimated nonoperating revenues:					
Grants	9,963,820	9,910,000	0	0	53,820
Rental income	37,696	0	0	0	37,696
Investment income	150,000	0	0	0	150,000
	-----	-----	-----	-----	-----
Total nonoperating revenues	10,151,516	9,910,000	0	0	241,516
	-----	-----	-----	-----	-----
Excess of estimated receipts over estimated disbursements	2,977,693	2,393,812	198,075	14,118	371,688
Equipment and building improvements	2,508,411	2,393,812	2,500	69,190	42,909
	-----	-----	-----	-----	-----
Excess of estimated receipts over estimated disbursements net of capital improvements	\$ 469,282	\$ 0	\$ 195,575	(\$ 55,072)	\$ 328,779
	=====	=====	=====	=====	=====

Minnesota Zoological Garden  
Revenue Classifications  
For the Year Ending June 30, 1990

Net Sales:

Supporting funds:

Animal Acquisition	\$ 60,000
Continuing Education	83,757
ZooArk	19,800
Sales Concessions	179,040
After hours/Lodge rental	43,250
Membership	297,057
ISIS	382,374

-----  
\$ 1,065,278  
=====

Other Operating Revenue:

Conservation Projects donations	\$ 30,000
Promotions	44,550
Annual Fund	122,707
Capital Campaign	281,905
Restricted gifts	32,000
Monorail Fiscal Agent II cash out	140,000

-----  
\$ 651,162  
=====

January 3, 1990

To: Members of the IUDZG Membership Committee

From: Kathryn R. Roberts, General Director, Minnesota Zoo



I am pleased to have been nominated for membership in the International Union of Directors of Zoological Gardens. I am providing the requested documentation to begin the review process.

1. A statement as to the purpose for which the zoo/aquarium was founded and who the management authority is.

The Minnesota Zoological Garden's mission is to strengthen the bond between people and the living earth. The State of Minnesota created the Minnesota Zoological Board in 1969 to plan the construction of a new zoological garden, which opened to the public in 1978. The primary objective of the zoo's planners was to provide a public recreation and education facility featuring naturalistic displays of animals in zoogeographic regions.

The Board has the authority to appoint the General Director who is the chief administrative officer of the Zoo. The Board, by formal action, has delegated responsibility for Zoo operations to the General Director in order to better fulfill its function as the governing rather than managing body.

As General Director, I provide leadership and direction, prepare the biennial and long-range program plans and budgets for review by Board committees and then approval by the board.

2. The official statement that the Minnesota Zoological Garden is a non-profit organization sponsored by a governmental body or society organized for education exhibition, scientific study and conservation.

A statement regarding the Zoo's non-profit status and a copy of the state statutes governing the Zoo are included as Appendix A.

3. A statement from the governing body of the zoo to the effect that it will support my membership in the IUDZG and will be permitted to attend a reasonable number of annual meetings; and that I am the chief executive and function as the official spokesman for the organization.

A letter in support of my nomination from the Chair of the Minnesota Zoological Board is included in Appendix B.

4. An organization table or chart of the zoo showing the composition of my staff.

The Zoo's organization chart is Appendix C.



5. A recent annual report including the operating and capital budget.

The annual report for FY 1989 which includes the operating budget; the Estimated Cash Receipts and Cash Disbursements for the Year Ending June 30, 1990 (Note that estimated expenditures for equipment and building improvements is \$2,508,411); and the Zoo's proposed capital campaign priorities for the next ten years are in Appendix D.

6. Informational material: a map of the zoo, a guidebook and samples of public relations and promotional materials published by the Minnesota Zoo.

Appendix E is informational materials.

7. A statement outlining the conservation program of the Zoo.

The Zoo's conservation program is explained on pages 5-8 of the Zoo's Strategic Plan (Appendix F). The Zoo recently gained a conservation assessment grant from IMS to be used to evaluate the Zoo's conservation policies and procedures. In addition, the Zoo Board recently formed a Conservation Committee to fine-tune guiding principles for the Zoo's Conservation Program, a copy of which is also included as Appendix G.

8. A statement and supporting documents concerning the education program of your zoo (zoo-school program).

The Zoo's education program is explained on pages 10-12 of the Strategic Plan (Appendix F) and in the enclosed education brochures (Appendix H). The Zoo's education department has received five national awards from the American Association of Zoological Parks and Aquariums (AAZPA) for significant achievement in zoo education. Additionally, the Minnesota Zoo's education department is the only zoo accredited by the North Central Association of Colleges and Schools. The education department is classified as a special function school. See page 8-9 of the annual report (Appendix D).

9. A statement explaining the scientific program of the Zoo.

The Zoo's scientific program includes research projects which are the subject of publications listed under Item 10.

10. A list of scientific and technical publications published by the staff in recent years.

The list of publications, with staff members' names in boldface type, is included in Appendix I.

11. A statement concerning the veterinary care program of your zoo which includes the name of the staff veterinarian or consulting veterinarian.

The Minnesota Zoo has two full-time staff veterinarians. The senior veterinarian is Dr. Peregrine Wolff; the staff vet is Dr. Kris Petrini. Other Animal Health staff include two Animal Health specialists, a medical records specialist, and two hospital keepers. The Animal Health activity is responsible for preventive veterinary care, quarantine procedures, prompt veterinary treatment and diagnosis in the event of animal sickness, and adequate pathology performed on all diseased animals. In addition, interns are regularly employed in conjunction with the Veterinary program at the University of Minnesota.

12. A recent status report on the animal collection including changes within a 12 month period.

The Status Report on the Zoo's animal collection, based on data in our ARKS system file, is fundamentally identical to the format requested. The one change is that columns 2 and 3 are reversed. See Appendix J.

13. Your curriculum vitae, as the Director, including a statement of my personal goals in my zoological facility and the zoo profession and my thoughts regarding the IUDZG policies on the "Species Management Program."

My curriculum vitae is included in Appendix K. Please refer to the Strategic Plan (Appendix F), which represents my personal goals for the Minnesota Zoo. My commitment to species management programs is evidenced by my participation in the CBSG as well as ISIS.

If, after review of these materials, you have additional questions, let me know and I will promptly respond.

KRR/gb

MINNESOTA ZOO



1988-89 ANNUAL REPORT

## TO OUR CONSTITUENTS

This past year at the Minnesota Zoo has been fun and exciting, not only for Zoo visitors with the opening of the new Koala Exhibit, but also for our staff.

Throughout the year, we have made further strides to fulfill our goal: to provide Minnesotans with distinctive natural experiences while contributing to understanding and conserving the precious world around us. With the Koala Exhibit's opening and receipt of funding for a similarly unique future exhibit, we have taken another step toward our dream of offering greater opportunities for enriching, entertaining, and educating our visitors.

The Zoo's success with this program of long-term enhancement would be impossible without the cooperative effort of the Minnesota Legislature, corporations, foundations, and the people of Minnesota. We thank you for helping us to make the Zoo a dynamic organization, continually adding and growing to fit your needs.

Just as people around the globe have begun seriously debating ecological issues, these issues always have been of prime importance to those of us at the Minnesota Zoo. To demonstrate our commitment, the first-ever conservation policy was developed and approved by the Zoo board in April. This policy reaffirms the Minnesota Zoo's firm conviction "that humans are partners in the bond with the flora and fauna of this planet." The Zoo's commitment to conservation is embodied in our educational and recreational programming, which enables visitors to learn about the fragile balance between nature and humanity, and have fun at the same time.

**The Year's Highlights** The opening of the Koala Exhibit in May marked the year's high point—for us and for our visitors. This major new attraction drew more than 150,000 people in the first month and continues to delight visitors daily.

The "koala fever" helped us boost Zoo annual attendance, an increase of 120,000 visitors to a total of 940,000 for the year. Memberships reached an all-time high of more than 15,000.

**Momentum Toward the Future** As one of the best zoos in North America, the Minnesota Zoo is committed to serving all Minnesotans with better exhibits and programs. We are building to achieve that vision through a long-term plan to enhance the range of our exhibits and programs. Momentum continues to grow for this effort.

Thanks to the Minnesota Legislature, which provided a \$750,000 grant to match the gift we received last January from International Dairy Queen, we have the funding needed to make the Coral Reef/Shark Exhibit a reality. This cooperative effort, combined with the traditional private generosity of so many Minnesotans and with revenues from Zoo operations, has enabled us to begin preparing for this major enhancement at the Minnesota Zoo. Construction on the coral reef exhibit will begin in October 1989 and will be completed by spring 1991.

## TO OUR CONSTITUENTS

**Fiscal Stewardship** In fiscal year 1989, the Minnesota Zoo generated revenues through admissions, memberships, gift store sales, concessions, and contributions for approximately half of our operating budget! This is a remarkable achievement, and says something about the commitment of the Zoo's staff and volunteers to respond to visitors' needs.

Other fiscal achievements include a balanced budget and on-target revenues. Plus, capital projections for the Koala Exhibit were met and the exhibit is all paid for.

**A Look Ahead** Next year will likely look quite different from 1989 in several respects. Due to construction of new exhibits and improvements to existing exhibits, we expect attendance and perhaps revenues to moderate somewhat. Although there is no way to build a better zoo without temporary disruptions, we will be working diligently to inform potential visitors of the status of all construction and its effects on the Zoo throughout the year.

So far, we have completed plans for the Bird Show Amphitheater, started construction on the Tropical Coral Reef, and have begun organizing and planning for the Zoo's largest fundraising effort since the Zoo opened in 1978.

We will continue, with your help, to keep up the momentum toward an even more exciting Minnesota Zoo for you and your neighbors. Thanks for your consistent support.



Kathryn R. Roberts  
General Director



Bernadette J. Klein  
Chair, Board of Directors

## THE ANIMAL COLLECTION



The Minnesota Zoo is noted for its displays of well-cared for animals in creative settings similar to their natural environments. These settings reflect the Zoo's ongoing commitment to conservation and offer Zoo visitors an opportunity to build their appreciation of the bond between people and the living earth. And, it's more fun to see the animals interacting in their natural settings.

The animals are presented in natural social groups on theme trails that recreate zoogeographic regions of the world.

The Koala Exhibit, which opened in May, is the newest and one of the most complete exhibit packages to be added to the Minnesota Zoo since its opening. It was a success story which encompassed the entire Zoo, staff and visitors alike.

The building, public areas, animal holding, and exhibit shell were designed and constructed by outside contractors. Inside, the exhibit itself, was designed and built by Zoo staff. The nocturnal exhibit is complete with twinkling stars, night sounds, and a flowing stream.

Endless hours of energy and talent make this a one-of-a-kind exhibit.

The uniqueness of the exhibit and also the appeal of the animals make the koalas a popular exhibit. Record-breaking visitor attendance figures demonstrate this popularity. Only six North American zoos have permanent koala exhibits.

The two koalas are on a permanent loan from the Los Angeles Zoo with the hope that the pair will reproduce and increase the koala population outside of Australia.

**Minnesota Trail** This trail, exhibiting native wildlife of the state, offers visitors a chance to experience the fauna of Minnesota.

The Minnesota Lake Exhibit, a representation of a northern lake, opened in October 1988. This 9,600 gallon exhibit displays 41 native fish representing 10 species.

The Zoo's beaver pond exhibit continues to be internationally recognized as outstanding. This year, Japan Broadcasting Corporation and the Montreal Biosphere Development Team were among those who visited the Zoo to film and study the exhibit.

A Common loon, hatched and reared at the Zoo in 1985, died in March 1989. This loon, the longest-lived in captivity, provided the Zoo with valuable information about management of this species in captivity. Plans for the future include other opportunities to breed and exhibit loons.

**Tropics Trail** The displays of dense foliage in the Tropics Trail, provide backdrops for the exotic animal species native to Southeast Asia.



## THE ANIMAL COLLECTION

The Asian fresh water fish tank was completely renovated by the Zoo staff early in 1989. The exhibit was reopened with a display of 60 fish representing nine species.

A "specialty of the week" was initiated for the primates. Produce items that are difficult to eat, such as whole corn-on-the-cob and watermelon, are given to the primates to provide variety in their menu and to stimulate healthy interactions.

**Northern Trail** This outdoor trail recreates a series of circumpolar environments from the North American plains to the tundra and steppes of Northern Asia. Hardy animals from the northern regions are well acclimated to the seasonal changes they find in Minnesota.

Modification of the Prairie Bird Exhibit was started this year. The first phase of the project will be "predator proofing" the exhibit to protect the waterfowl from local raccoons, mink and fox. When complete in 1991, the exhibit will be representative of a midwestern prairie pothole

featuring American white pelicans and a diverse number of other prairie waterfowl species.

In June 1989, structural renovation of the Prairie Dog Exhibit was completed. The changes allow the colony to be more effectively managed.

**Ocean Trail** The aquatic exhibits in the Minnesota Zoo introduce visitors to aquatic animals, their communities and the special ways they have adapted to life underwater.

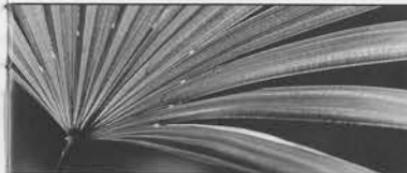
The dolphin show has been expanded to feature an original musical composition and new animal behaviors. The new show is fun for Zoo visitors and effectively communicates the necessity of saving the world's oceans.

**Zoo Animal Population** This successful year of breeding demonstrates the Minnesota Zoo's expert management of animals in captivity.

The Tropics' aviaries experienced one of the best years ever for the number of passerine species bred. Three species — bamboo partridge, golden pheasant, and Baikal teal — which had never before bred at the Zoo, produced young. Of the 69 species of birds in the exhibit, 68 were set up in breeding situations. To date, 54 of the 68 have attempted to nest and 54 have produced young.

The design of the Wolf Exhibit allowed for videotaping of the birth of a rather large litter of seven wolf pups, as well as a video display of the mother and young. No other zoo has been able to show the rearing of a litter of wolves to this extent. The videotape will be a valuable resource for developing additional educational video presentations.

The North American river otters produced two more litters, the fifth and sixth litters to be



## THE ANIMAL COLLECTION

born at the Zoo since 1986. No other zoo in North America consistently breeds this species.

Three beaver kits were born this year, with two surviving, making this the eleventh year in a row that the beavers have produced in their natural setting.

The Minnesota Zoo has one of the most productive herds of bactrian camels in North America. This year, five camels were born making the total number born at the Zoo 41.

Over the past eleven years, more than 90 pronghorn fawns have been born at the Zoo, with 11 born in 1988-89. Through the efforts of Zoo staff, the Zoo has been instrumental in setting standards for the successful management of pronghorn in captivity.

A white-cheeked gibbon was born in November and is the fourth produced since 1979. Less than 50 animals of this rare and endangered species are found in North American zoos.

**Conservation** The Minnesota Zoo's accreditation by the American Association of Zoological Parks and Aquariums (AAZPA) is based on meeting the highest professional standards of animal care. Active and healthy animals enhance the Zoo's ability to educate the general public about animals in their natural habitats, and reflect the Zoo's strong conservation policy "to provide leadership in conserving the biological diversity of our planet and in protecting the wild species living under our stewardship."

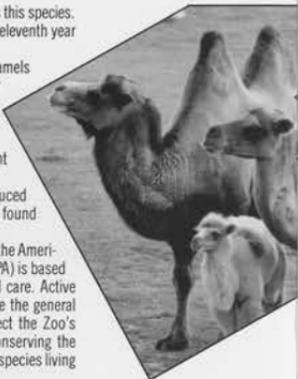
The Zoo is an active participant in the AAZPA's Species Survival Plan (SSP) programs, an effort to preserve threatened or endangered species by maintaining viable, self-sustaining, captive populations.

The Minnesota Zoo continues to play a leading role in the Siberian Tiger Species Survival Plan, the first and largest SSP program in North America. This past year, significant work has begun on compiling a tiger

husbandry manual; developing recommended protocols for tiger breeding; and establishing a major, new database on pathology of tigers.

### Animal population by species and specimens

	Species	Specimens	Acquisitions	Dispositions
Amphibia	2	4	0	2
Reptiles	32	97	79	49
Aves (Birds)	125	593	236	147
Mammalia	73	456	148	131
Fish & Invertebrates	92	343	208	146
<b>TOTALS</b>	<b>324</b>	<b>1493</b>	<b>671</b>	<b>475</b>



## THE ANIMAL COLLECTION

The Minnesota Zoo continues to be a leader in developing new and effective techniques for the transfer of genetic material between captive and/or wild populations of tigers. Continued efforts in conjunction with the Calgary zoo to import wild-caught Siberian tigers from the Soviet Union are underway to augment the captive population.

On the horizon, the Minnesota Zoo expects to convene a Third International Tiger Symposium at which delegates from all parts of the world where tigers reside will assemble and draft a Global Tiger Master Plan. This action plan will guide decision-making for the next decade on how to keep free-ranging tigers resident on the globe.

The Siberian Tiger SSP is an example of the kind of programs the Zoo is working to establish with the other eight SSP programs: Asian small-clawed otter, lion-tailed macaque, clouded leopard, Bali mynah, Malayan tapir, red panda, and Asian wild horse.

The Zoo's commitment to conservation is further demonstrated by staff participation in fifteen reproductive research projects to help propagate endangered species.

For the seventh year in a row, the Minnesota Zoo continued its participation in the Minnesota Trumpeter Swan Restoration Program which is a cooperative effort with the Department of Natural Resources and the Suburban Hennepin Regional Park District. In May, 12 two-year-old trumpeter swans were released onto specially selected marshes and lakes near Detroit Lakes, Minnesota. Most of the release sites are in the Tamarack National Wildlife Refuge. To date, 34 of the 90 swans released are from the Minnesota Zoo.

The Minnesota Zoo plays a unique role as headquarters for three distinct conservation functions. The Zoo hosts the International Species Information System (ISIS) program, the associated offices of the Conservation Coordinator, and the offices of the International Union for the Conservation of Nature's (IUCN) Captive Breeding Specialist Group (CBSG). By hosting these activities, the Zoo acts for the care and conservation of world-wide zoological collections.

**Animal Health** The Minnesota Zoo's strong commitment to quality is reflected in the healthy animals on exhibit. One full-time veterinarian was added to the Zoo staff, so now, two veterinarians provide superior care, seven days a week, for the animals.

The Minnesota Zoo has begun to formalize a relationship with the University of Minnesota Veterinary College. This new relationship includes a training program at the Minnesota Zoo for senior veterinary students providing them with the opportunity to learn more about exotic animals through clinical experience and lectures. In addition, Zoo veterinarians have increased opportunities to confer with colleagues at the College of Veterinary Medicine on complex animal cases.

New this year, as well, is a computerized animal medical records keeping system which is being tested at the Minnesota Zoo.



The Minnesota Zoo offers programs to reach all of our visitors, but a special emphasis is put on teaching youth to have respect, concern and a sense of responsibility for the future. More than 87,000 students from 80 counties around the state of Minnesota came to the Zoo on field trips this year.

The Zoo takes pride in serving the entire state of Minnesota. Throughout the year, the Zoo's outreach programs carry the wildlife conservation message to schools and communities all over the state.

The Zoo Ark program, by bringing small animals to settings outside of the Zoo, provides programming for more than 57,000 people in 46 counties. Zoo naturalists and animal ambassadors share animal natural history and tell the story of the Zoo's role in wildlife conservation.

Twenty-five volunteers for the Speakers' Bureau presented programs to more than 10,000 people in 187 speaking engagements given to schools, business organizations, community clubs, churches and senior citizens' centers.

Continuing Education Classes offered expanded programs for the visually impaired and programming for children with other disabilities to enable them to participate in summer camp and preschool programs. These classes and programs were attended by more than 2,400 members this year.

ZooSchool, an intensive scientific work experience for highly motivated high school youth, was awarded a two year Young Scholars program grant from the National Science Foundation. This education grant will provide stipends and cover expenses for the ten students enrolled during the summer program.

Other programs include teacher in-service training, college internships, specialized tours, and school curriculum aids. This year the Minnesota Zoo was re-accredited as a Special Function School by the North Central Association of Colleges and Schools.



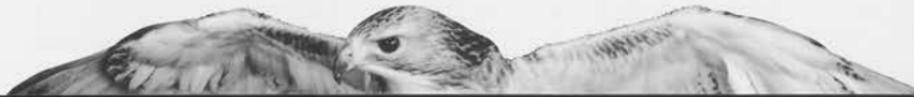
**Discovery Trail** The *Discovery Trail* provides visitors with fun opportunities to learn about animals through close contact. The Children's Zoo is home to domestic animals from around the world. Visitors enjoyed the Contact Yard and World Barn with llamas, reindeer, a yak, a donkey, an elephant ride, fjord horses and a variety of ducks and rabbits. Animal demonstrations, puppet shows and video presentations are just a few of the ways the Zoo teaches respect and concern for wildlife conservation in entertaining formats.

**ZooLab** *ZooLab*, one of the Zoo's most popular exhibit areas, introduces visitors to small and domestic animals from each of the major animal groups: water and land invertebrates, fish, mammals, reptiles, amphibians, and birds. *ZooLab* invites active participation with the animals and, thus, encourages a healthy sense of wonder and respect for all living things within a fun setting. This year, special teaching units on

conservation were developed and presented to school groups.

**Skytrail** *Skytrail*, the only all-weather monorail system in the United States, was used by 322,219 visitors this year. *Skytrail's* twenty-five minute narrated journey is a convenient and enjoyable way for Zoo visitors to learn more about the animals on the Northern Trail.

**The World of Birds Show** *The World of Birds Show* presented by Steve Martin, offered six days a week, conveys the importance of birds in our environment and promotes the conservation of wildlife habitats. This year, this popular show included new species: an Andean condor, a golden eagle, and an Abyssinian ground hornbill. It is acclaimed as one of the most enjoyable and educational shows of any zoo in the country.



The Minnesota Zoo is enlivened year 'round with exciting and educational family entertainment. In addition to the daily feedings, animal shows, animal demonstrations and education classes, special events and activities enhance a day of fun at the Zoo.

September's Walk for the Wild, a fundraiser for the Zoo's "A.D.O.P.T. an Animal" program, was sponsored by Dayton's and Rockport Shoes. The event drew a record-breaking 3,600 participants and netted \$15,000.

The Zoo's Spooktacular is becoming the Halloween alternative for members as well as general visitors. This year's "bat cave" and "ghost train" offered thrills and chills for all visitors. The event drew 8,000 visitors.

The first annual Beastly Ball was a monstrous success! This event was a sell-out with more than 500 guests, and generated just under \$40,000. It was listed by *Mpls/St. Paul* magazine as the most creative fundraising event of the year.

The Christmas holidays would not have been complete without Santa's Workshop, Kids Only Shopping, photos with Santa and music featured every Saturday in December.

Breathtaking views of musk oxen, camels, wolves and woodland caribou in their natural winter settings can be seen on the Minnesota Zoo's cross country ski trails. Ski rental sales increased this year as 5,395 people took advantage of the well-groomed trails.

The Tropical Beach Party offered a welcome break from the winter weather in late February. Calypso music and tropical tours highlighted

this cabin-fever break.

This year, visitors enjoyed learning about the Southeast Asian culture by viewing handwork and listening to musical performances at Southeast Asian Days in March.

The 5th Annual Mom's Day at the Zoo, sponsored by Carson Pirie Scott Department Stores, invited moms and kids to enjoy the opening of the Koala Exhibit.

The Sunday Concert Series was expanded to include evening performances every Sunday between Memorial Day and Labor Day. Visitors were entertained by the finest local musical groups from reggae to ragtime.

Conservation Days in June brought representatives of more than 20 organizations concerned with the future of wildlife to the Zoo to share information with Zoo visitors. Heart of the Beast Theatre provided entertainment which highlighted the impact of humanity on the world we inhabit.

**Service With a Smile** The Minnesota Zoo is dedicated to providing the best service possible to make the Zoo a fun and educational experience for all visitors. Through Guest Services,



the Minnesota Zoo works to anticipate the needs of every guest who walks through the door, meet those needs and hopefully exceed their expectations. This year, in addition to the thousands of dollars collected for locker and stroller rental fees, Guest Services also offered comprehensive services in a variety of areas which included:

- 5,200 memberships processed at Guest Services Center
- 5,125 postage stamps sold
- 479 lost kids, found
- 402 diapers sold
- 1,059 lost items turned in
  - 17 school children left behind, safely delivered
  - 157 baby bottles warmed
- 1,609 guest comment cards received and comments distributed to staff
- 2,445 wheelchairs rented
  - 1 hippo in swimming pool, Zoo was called to see if it was ours

The Zoo's Birthday Party Program celebrated 593 birthdays with 5,685 participants this year. People of all ages enjoy the parties, even an 84 year-old woman celebrated her birthday at the Zoo. From Alton to Woodbury, and from as far away as Sugarland, Texas, guests throughout the area made plans to "spend a day at the Zoo and celebrate your birthday, too!"

**Membership** A record-breaking 15,605 memberships were sold this year — an increase of 13 percent from last year! Zoo members take full advantage of what the Minnesota Zoo has to offer. Fun-filled events and activities drew these members through the Zoo's gates more than 115,000 times during the year. Members enjoyed the

bi-monthly *Minnesota Zoo Magazine*. More than 87,000 copies were mailed during the past year.

Here is a look at Zoo membership over the past five years:

1985	1986	1987	1988	1989
8,904	10,739	13,578	13,725	15,605

**Join the Group** The Minnesota Zoo's group sales carried on a growing tradition with expanding the corporate discount and group tour programs. The picnic pavilions were reserved every weekend day, June through September, as groups took advantage of the Zoo's attractive grounds.

The After Hours program, which markets the rental of designated spaces throughout the Zoo for private evening functions, scheduled more than 40 parties and Zoo sponsored events this fiscal year.

More than 400 Minnesota Zoo volunteers donated 55,866 hours of service this last year. Volunteers, ranging in age from 13 to 81 years of age, enhanced and extended programming in many directions, both on- and off-site. Typical activities for some volunteers included leading school group tours, staffing information booths, and giving animal demonstrations. Others donated their time to assist on the cross country ski trails or to take on the character of the Minnesota Zoo Moose in a costume.

The Minnesota Zoo is concerned about improving the skills and abilities of its staff and has offered a number of training programs to help. They include: a customer service training program for frontline staff; and a leadership training program for supervisors and managers.

**Up to \$100**

John P. and Barbara L. Armour  
 Andrea Bell Apletveth  
 James and Betsy Bogaie  
 Jeffrey L. and Debra L. Clark  
 Creek Valley Elementary P.T.A.  
 Elizabeth Drake  
 George A. and Mary W. Dransahl  
 Earl and Miriam Dussell  
 Elsie Ewert Memorial  
 Gerald and Selma Givng  
 Mrs. E. M. Groth  
 Kenneth Hoover  
 Norris D. Jackson  
 Virginia T. Kajak  
 Nancy L. Langness  
 Joseph E. and Arline Lee  
 Marjorie M. Lychik  
 Paul Ludlow  
 Stuart MacPhail  
 Mrs. Willard Mapes Memorial  
 McCaw ICC Communications  
 The McVay Foundation  
 Minnesota Valley Veterinary  
 Medical Association  
 Helen C. Wjoltnes  
 Candace Kair  
 Rosemary D. and Harvey D. Ogren  
 Orono Independent School  
 District 178  
 Thomas Payton  
 Richfield Bank & Trust Co.  
 Philip Rickman  
 Frances Elizabeth Schaar  
 Michael C. Shannon  
 Mrs. A. Godfrey Siverson  
 Madeline A. Smith  
 Dr. Michael J. and Jane D. Spencer  
 Barbara J. Stevens  
 Janet M. Ungs  
 M. Jeanne Bergum  
 K.S. and R.C. Wenas  
 Michael J. Zarowski

**\$100-499**

Mr. and Mrs. Ronald Anderson  
 Mrs. Charles Bosty  
 Buckley Cayen Boardman Memorial  
 Roy Boltz Memorial  
 Coeposit, Inc.  
 Dudd B. and Ann A. Cosgrove

**Violet A. Crawford Memorial**

Ella P. Crosby  
 DVM Old Garden Club  
 Financial Publishers  
 G & R Services, Inc.  
 Arnold and Sylvia Goldsman  
 Mr. and Mrs. Bernard M. Graham  
 Frank Harshfield  
 Douglas C. and Sharon R. Hubbard  
 John F. Kennedy University  
 Shirley D. Johnston, DVM  
 Kenneth S. MacKinzie  
 Metropolitan State University  
 NKK  
 (Japan Broadcasting Company)  
 Northwest Reproductions  
 Josie and Edward Florbe  
 Mary F. and Douglas R. Platt  
 Lyndsay Jean Ricker Memorial  
 The Rice Foundation  
 Dr. Sallie P. Sheldon  
 William H. Spoll  
 The Charles B. Sewall Foundation  
 The Norman H. Tallakson Trust  
 Mrs. E. Palmer Tang  
 Warner Properties  
 Weston Leasing Corporation  
 Zonta Club of Minneapolis

**\$500-999**

AI/SCM Local #1929  
 Barry Bonhoff  
 Mark and Marcia Cherniack  
 Marsh & McLennan, Inc.  
 Jennifer Meyer Memorial  
 Pentac, Inc.  
 The Quaker Hill Foundation  
 Remmelte Engineering, Inc.  
 Wives of Rich  
 St. Paul Center/BCE Development  
 Jeffrey E. Stiefen  
 The Whitney Foundation  
 Paul E. Zellman

**\$1,000-4,999**

The Elmer I. and  
 Jeanne J. Anderson Foundation  
 Gordon Pine Scott  
 Bachman's, Inc.  
 Black's Photography  
 Joseph and Ruth Buchan

Burton D. and Rusty Cohen  
 The Julia Thorge Cole Trust  
 Elise and Tom Crosby  
 GE Capital Fleet Services, Inc.  
 Gannar Industries, Inc.  
 Mary Livingston Griggs and  
 Mary Griggs Burke Foundation  
 International Dairy Queen  
 Investment Advisors, Inc.  
 JF Prusner Butler  
 Kimberly-Clark Corporation  
 Suzanne and Kap Krielman  
 Gregg Edwin Larson Memorial  
 Kenneth W. Lindborg  
 Donna Marie and Richard Luther  
 MCA Home Video  
 SEB & Souded Distributors  
 The Matbook Foundation  
 Minnesota Mutual Life  
 Insurance Co.  
 Minnesota Zoological Society  
 The Nash Foundation  
 Park East Tours  
 The Pillsbury Company  
 The Margaret Rivers Fund  
 The Saint Croix Foundation  
 Sears, Roebuck and Company  
 The Smith Foundation  
 Unisys  
 The Walgar Corporation  
 Elizabeth M. Waston

**\$5,000-9,999**

2M  
 Nancy Azzam  
 Deloitte Haskins & Sells  
 IBM  
 Charles W. Jones  
 MPLS. ST. PAUL Magazine  
 Nona Meyer & McGrath  
 Rosemont, Inc.

**\$10,000+**

American Express  
 The F.R. Biglow Foundation  
 Gordon Pine Scott  
 The Chaitwick Foundation  
 Mr. and Mrs. Edward N. Dayton  
 Koch Industries, Inc.

**Matching Gifts**

The Gray Research Foundation  
 Edson Corporation  
 Emerson Electric Company  
 The First Bank System Foundation  
 IBM  
 IDS Financial Services, Inc.  
 The NOR Foundation  
 The Saint Paul Companies  
 USWest

**In-Kind Contributions**

Ask Mr. Foster  
 Bachman's  
 Black's Photography  
 Blue Cross Blue Shield  
 Bolger Publications  
 Carlson Pine Scott  
 Cole & McVey Inc.  
 Dayton  
 Delta Air Lines  
 Frilo Lay  
 Fuji  
 Garden & Associates  
 General Foods  
 Gladstone House  
 IBM  
 International Dairy Queen  
 K102-FM Country  
 K.L.K.  
 KTCZ  
 Andrew Klinek  
 Kodak  
 Litho Specialties  
 Little Caesars Pizza  
 MTL Incaditors  
 David Meach  
 Messeri and Kramer  
 MPLS. ST. PAUL Magazine  
 Niagara Outdoor Advertising  
 Northwest Airlines  
 Process Four  
 Proctor & Gamble  
 R/W/Midwest Welding, Inc.  
 Richard Hamilton Smith  
 Royal Caribbean Cruise Line  
 San Diego Wild Animal Park  
 San Diego Zoo  
 SeaWorld of San Diego  
 Super America  
 WCCO-TV  
 WLDF  
 WLFE





# MINNESOTA ZOO CONTRIBUTORS

Doretta O'Donnell  
 Sarah O'Leary, Mark Presson  
 Patricia L. O'Rourke  
 J.P. O'Shaughnessy  
 Dakota's Elementary School,  
 11th Grade  
 Mr. & Mrs. A.H. Obaid  
 Linda Oberier  
 Sheryl Olcott  
 Anne Olson  
 Susan Oltshaker Olgard  
 Jeffrey Olthoff  
 David Olshoff  
 Mrs. F.J. Olson  
 Mildred Olson  
 Barbara Olson  
 Gene R. Olson  
 Dr. Diane Olson  
 Sarah Olson  
 Lyle & Karen Olson  
 Robert Olson  
 Ron, Katy Olson  
 Eva Olson  
 Barbara Olofs  
 Ann Omenick  
 Jean Orstad  
 Elms D. Oppenheimer  
 Rochelle Orloff  
 Jan Ellen Osterberg  
 Rebecca Osterberg  
 Dawn Ota  
 Cheryl & Gene Otsenkowsky  
 Chris Osgood  
 Chava Oshberg  
 Sandra L. Oujri  
 Richard Owen  
 Anne Palgouti  
 Paula Page  
 Richard & Page  
 Edward & Holly Pallesen  
 Melissa Palmer  
 Sandra Pamer  
 Marilyn M. Parker  
 Jane Parkins  
 Dawn Parshall  
 June Paschke  
 Jean Patten  
 Mrs. J.C. Paul  
 Jean Paulsen  
 Mary Padoch  
 Lisa Powell  
 Anne Pavlik  
 Anthony Payne  
 Marilyn Payne  
 Christy Payne  
 Ken Pearson  
 Deb Pearson  
 Debra Pearson  
 John Pease  
 Mr. & Mrs. Allen Peckack  
 Erik E. Pedersen  
 Pat Pedersen  
 Aivao Pello  
 Linda Pello  
 Rebecca Perkins  
 Alan & June Perkins  
 Craig M. Perlov  
 Beth Perlov  
 Don Perrot  
 Jean Marie Perout  
 Virginia Peschke  
 The Pescovitz Family  
 Mr. & Mrs. Cyril F. Pezak  
 Jenice Peterson  
 Joyce Peterson  
 Jeff Peterson

Julie Peterson  
 Pat & Ray Peterson  
 Margaret Peterson  
 Jenny Peterson  
 Mrs. Evelyn Peterson  
 Mrs. Jay Peterson  
 Rachel Peterson  
 Scott & Sue Peterson  
 Lois Peterson  
 Lois Peterson  
 Bernadette Peterson  
 Susan Peterson  
 Alice Peterson  
 Kathleen Peterson  
 Karen M. Peterson  
 Julie V. Pettit, M.D.  
 Bill Petrich  
 Robin J. Petrie  
 Jeff Peterson  
 William Peyerl  
 George & Catherine Pflieger  
 Matthew Pflieger  
 Louise A. Pflieger  
 Mary Philipp  
 Ruth Phillips  
 Sonnie Phillips  
 Jennifer Phipps  
 The Markin Pierson's  
 Norm & Elaine Pietsch  
 Stuart Pihlstrom Family  
 JoAnne Pihl  
 Pajunen Lane 3rd Grade  
 Pine Island School  
 John Pihl  
 Chava Pihlstrom  
 Rebecca Pihlstrom  
 Mary Pihl  
 Debra Pihlstrom  
 Arty Pihl  
 Debbie Pihl  
 Garold & Sandee Pihlstrom  
 Margaret L. Pihlstrom  
 Joel Pihlstrom  
 G.T. Pogany  
 Helen Polak  
 Stephen Polonsky  
 Leo J. Polak  
 Janet Polak  
 Monica Polak  
 Cheryl Pollock  
 Kathleen Pollock  
 David Pollock  
 Bill Porchous  
 Karen Richardson  
 Anthony Powell  
 Melissa Postage  
 Kenneth Posthous  
 Holly Potvin  
 Bruce, Karen & Sarah Power  
 Paul Power  
 Preuss Campfire Group  
 Kathy Price  
 Susan Ring  
 Sandra Prieznitz  
 Mary Probst  
 Rebecca Probst  
 Owen Probst  
 Joseph A. Pulli  
 Jack Roberts  
 Thomas Puchobinski  
 Prady Quilly  
 Carmen Roberts  
 Sharon Quam  
 E.K. Quam  
 Kevin & Connie Quass  
 Lindsay & Julie Quass  
 Connie Quass  
 Quinlan Quass  
 Cheryl Quass

Cheryl Quinlan  
 Fern Quirk  
 Helen M. Rautz  
 Sarah & Thomas Rada-Scott  
 Kim Raggatz  
 Linda Raggatz  
 Ed & Ellen Ragain  
 Marvin G. Ragner  
 Dr. Curtis Ragner  
 Dorothy Roland  
 Shelton Romberg  
 John Romberg  
 Michael & David Rowan  
 Ann Rowan  
 Regina Rowan  
 Andrew J. Rappoport  
 Mr. & Mrs. Leonard A.  
 Rappoport  
 Susan & Adam Rappoport  
 James R. Rasmussen  
 Robin Rasmussen  
 Eileen Rathbun  
 Ron Rausch  
 Terry Rebeck  
 Ronen R. Reagan  
 Kathryn Reali  
 Karen Reamer  
 Rod Hawk Ream  
 John Reed  
 Michael Reed  
 Cary K. Reed Weatherly  
 Dawn Rymaszewski  
 Barbara & Thomas Reun  
 Dave Reichert  
 Nancy Reichen  
 Jean Reindl  
 David Reischel  
 Debra Reisman  
 Butte Reko  
 Helgen Reimpe  
 Wayne Reiss  
 Elizabeth Govey Sandvick  
 Jeffrey Sandvick  
 Mr. & Mrs. Ronald Sarazin  
 Paul & Meredith Savage  
 DeW. Savage Elementary  
 Randy Scheidt  
 Jamie Shoby  
 Mrs. J. & Mrs. Norman Rice  
 Katherine Rice  
 Linda Rich  
 Debbie Richberger  
 Sara Richy  
 The Richman Family  
 Lynne Richmond  
 Jim Richter  
 Paul Rickard  
 Clair Rivlin  
 Marilyn Riley  
 Cheryl Rice  
 Kathryn Ringham  
 Ronald Ringo  
 Thomas Ringo  
 Mary Ritter  
 Lynette Robbins  
 W.A. Roper  
 Bill, Dan, Chris, & Carla  
 Schinderman  
 Darla Schinderman  
 Dave Scholtz  
 Roy Schomburg  
 Barbara Schomburg  
 Steve Schomburg  
 Judith Schroeder  
 Joyce Schuchman  
 Charles E. Robinson, M.D.

Bobbie Schuler  
 Dave Schuler  
 Holly Schultz  
 Mrs. Henry Schultz  
 Judy Schultz  
 Karen Schultz  
 The Schulz Family  
 Jan Schuler  
 Charles, Cherie, Ryan, & Lisa  
 Schuman  
 Kelly Schuler  
 Ken & Bruce Schuler  
 Ronald & Janet Schultz  
 Sharon Schwarz  
 Kevin Schwarzbauer  
 Laura Schwenker  
 Ellen Schwaner  
 Gerry Sconzo  
 Scott Lake Pet Clinic  
 Cheryl Seaton  
 Fred R. Seavey  
 Sharon Sechrist  
 John Seebach  
 Ruth Seebach  
 Willie Segal  
 Beth Ann & Sal Segal  
 Steve, Mary & Brian Seiditz  
 Mrs. George Seip  
 Prudence Seifert  
 Violet Sell  
 Stuart Selars  
 David Selzer, Ann Miller Selzer  
 Mr. & Mrs. James Serrin  
 Guine & Paul Seston  
 Cheryl A. Sempkins  
 Jim Senthos  
 Brigitte H. Sengstager  
 Marietta Senig  
 Dennis Senig  
 Gordon Shepard  
 Roxanne Sherburne  
 James S. Sherman  
 Corinne Sherr  
 Holly C. Shick  
 Bruce Shikma  
 Melissa Shierman  
 Nancy Shierman  
 Judy Shierman  
 Marc Simego  
 Caroli Schreyer-Rosend  
 Sioux Valley-Rosend Lake  
 5th Graders  
 James Slichter  
 Steve & Julie Slichter  
 Norma L. Schue  
 Frank & Carol Schuel  
 Scott Schuly  
 R.S. Schuman & R. Gremman  
 Jennifer Schurke  
 Don Schiller  
 Margy & Gene Schiller  
 Mr. & Mrs. Bernard Schlobner  
 David W. Schmidt  
 Ann Schmitt  
 Pamela Schmitz  
 Richard Schmitz  
 David Smith  
 Catherine Smith  
 W.A. Smith  
 C.L. Roberts  
 Phil & Joanne Roberts  
 Charles Roberts  
 Kevin Roberts  
 Dr. James M. Roberts  
 Steve Robertson  
 Kathy Robrecht  
 Joyce Robinson  
 Charles E. Robinson, M.D.

Joan Sisson  
 Sons of Norway - Nondakwa Lodge  
 Lois Sorenson  
 Dianne Sorenson  
 Jani Sweatt  
 Karen Swift  
 Jacqueline Symons  
 Alexander T. Sykes  
 David Syverson  
 Shannon Swanson  
 Kelly M. Swarrow  
 Sally Swauden  
 Daniel S. Swicker  
 Michelle Swerick  
 Lori Spack  
 Dominic Spiccolo  
 Donald & Kathryn Sprague  
 Mrs. Candie Galloway Sprague  
 Cindy & Mark Spreest  
 Ann Taylor  
 David Taylor  
 W. Teichner  
 Elaine Tenopack  
 Charles & Lona Teunmyer  
 Donald Thiel  
 John Thiesen  
 Susan Thiele  
 Gregory J. Thielens  
 Nicole Anne Thies  
 Mary J. Thomas  
 Alan Thometz  
 Jane Thompson  
 Sue Thompson  
 Carole Thompson  
 Jenia Thompson  
 Jackie Thompson  
 Correy C. Thompson  
 Janet Thompson  
 Joan Thordycraft  
 Irene Thoren  
 Sandra L. Thomas  
 Stephen Thorkay  
 David E. Timm  
 Virginia Timmerman  
 Mary Torkham  
 Howard & Debbie Toberman  
 David Tolley  
 Wade & Donna Tobin  
 Christina Patrick A. Tobin  
 Lew Torkow  
 Paul & Ginger Torkow  
 Art Tones  
 Sherridge Student Council  
 Joe Trout  
 Mike Trout  
 Ann Summers  
 Susan Stover  
 Pat & Earl Stratton  
 Mr. & Mrs. Robert Strickland  
 Jeffrey & Katie Strickland  
 Elaine Strubler  
 Susan Stromberg  
 Julie Strout  
 Barbara Strub  
 Ann & Dorelle Suggs  
 Mrs. Miriam Sullivan  
 Cheryl M. Summers  
 Susan Elementary School  
 Student Council  
 Dee M. Sunler  
 Amy Sundstrom  
 Judy Suter  
 Pamela Suter  
 Susan Suter  
 Anne Swarlow  
 Claudia Swan  
 Mary Ann & David Swanson  
 Robert Swanson  
 Betty Swanson

Valentine Hills Elson  
 Alan Nagelme, M.D.  
 Penny Win Beck  
 Mary Ann Bergquist  
 Rick & Marlene Van Dellen  
 Karen Van Der Hagen  
 Dean & Ruby Van Horn  
 Mary Ann Van Nest  
 D. & Ina Orndorff  
 Bill & Bruce Van Stouven  
 Bill & Peggy Van Wychert  
 Stacy Vance  
 Dana & Barb Vandemoort  
 Vandenberg Jr & James  
 Andy Vandembosch  
 Kathy Vance  
 Mary Ann Vance  
 Connie Vagan  
 Lisa & Aaron Vaska  
 Elizabeth Vagstad  
 Marc T. Vae  
 Michael & Debra Veldman  
 Connie Venema  
 Cheryl Wieg & David Dillman  
 Vic Vickers  
 Paul Vokoryn  
 D & B Vrege Inc.  
 Lorna Vink  
 Gertraude Vining  
 Vets Vene Elementary  
 P.M. Kinderergarten  
 Susan Biele Warkye  
 Mary White  
 Mr. & Mrs. G. Allan Whitaker  
 Bill White  
 Rita White  
 Mr. & Mrs. Carl W. Wolf  
 Elizabeth Wolkenner  
 Stacy Von Bak  
 Joanne von Bism  
 John & Patricia Waskut  
 Melissa West  
 Jessica Rose Wessler  
 Tamara & Mary Woltz  
 S. Wolf  
 James & Janet Vroman  
 Melissa Public Schools  
 Grades 1 & 2  
 Melissa Public Schools  
 2nd Grade  
 Chava Wolf  
 Gloria A. Wolfner  
 Nancy Weger  
 James & Sue Weger  
 Chris Weger  
 Mary R. Weger  
 B. J. Wagner  
 Brett D. Wagner  
 Michael Waging Family  
 Joe H. Wall  
 Terence Wallace  
 The J. S. Wamock Family  
 Loraine Wood  
 Glenn & Joyce Wood  
 Gay Wood  
 Sharon L. Wood  
 Barry W. Wood  
 Joyce E. Woolley  
 Robert R. Wuzler  
 Doug & Peg Wuzler  
 Jeff & Sherry Wuzler  
 Susan Wuzler, Jr.  
 Lori Wren  
 Donna Wright

The Minnesota Zoo board and staff have worked cooperatively to develop a long-term plan to enhance the scope of the Zoo's exhibits and programs. For the Zoo to continue to maintain its current attendance base, and more importantly to grow, it is critical for the Zoo to put in place programs and activities that will bring visitors back to the Zoo for repeat visits and will bring new visitors for a first visit.

The Minnesota Zoo is planning to meet its ambitious capital improvement goal by initiating an aggressive capital fundraising campaign designed to draw from all of the various communities.

Momentum toward the Zoo's expansion goal is building with the public/private partnerships that already have been established. The Minnesota Zoo's aggressive efforts have resulted in significant contributions from corporate leaders such as American Express Travel Related Services Inc., Carson Pirie Scott, Dayton's, IBM, Medtronic, and International Dairy Queen.

## FISCAL STEWARDSHIP

The Minnesota Zoo is responsible to the citizens of Minnesota to provide one of the best Zoos in the country that will present a diverse and exciting array of exhibits. These new exhibits will be made possible by continued stewardship of the funds allocated by the Minnesota State Legislature and by funds generated by Zoo operations.

A total of \$10,042,543 was spent last year on the operation and improvement of the Minnesota Zoo. A little more than half of this amount was provided by the State Legislature. The remaining 48 percent was generated through admissions, gift store sales, concessions, and contributions.

Early projections indicated the Zoo would have surplus cash at fiscal year end. These projections proved to be inaccurate. The error had no impact on any current operations or on plans for future exhibits.

This coming year may show a slight drop in attendance due to the construction, but the Minnesota Zoo will maintain a balanced budget.

The following pages present the audited financial statements for the Minnesota Zoo's fiscal year, ending June 30, 1989.

Month	Minnesota Zoo Attendance				
	FY 1985	FY 1986	FY 1987	FY 1988	FY 1989
July	183,924	138,007	141,950	122,557	130,850
August	149,351	131,041	167,950	135,332	136,908
September	73,363	53,949	48,711	62,991	62,866
October	38,570	45,632	48,336	39,975	55,572
November	36,651	26,840	33,009	31,294	27,175
December	20,060	23,035	27,097	22,754	21,232
January	37,345	33,938	39,188	30,330	42,187
February	49,276	38,099	57,823	48,079	47,181
March	55,234	66,047	64,173	56,691	70,093
April	73,214	36,686	122,054	72,083	78,146
May	95,284	108,369	107,468	97,671	131,546
June	113,100	112,668	106,603	102,972	137,230
<b>TOTALS</b>	<b>928,372</b>	<b>836,211</b>	<b>963,462</b>	<b>822,200</b>	<b>940,985</b>

## BALANCE SHEETS JUNE 30, 1989 AND 1988

ASSETS	Notes	1989	1988
<b>CURRENT ASSETS:</b>			
Cash and temporary cash investments	1, 2	\$ 2,241,468	\$ 3,299,268
Accounts receivable		92,657	66,148
Grants receivable	5, 7	1,950,000	225,054
Inventories		443,518	362,127
Total current assets		4,727,643	3,952,597
RESTRICTED CASH	1	185,803	182,099
ANIMAL AND HORTICULTURAL COLLECTIONS	1	1	1
PROPERTY, PLANT, AND EQUIPMENT		38,779,148	36,649,183
Less accumulated depreciation		(11,366,898)	(10,190,594)
Net property, plant, and equipment	1, 3	27,412,250	26,458,589
<b>TOTAL ASSETS</b>		<b>\$32,325,697</b>	<b>\$30,593,286</b>
<b>LIABILITIES AND FUND EQUITY</b>			
<b>CURRENT LIABILITIES:</b>			
Accounts payable		\$ 811,523	\$ 543,866
Accrued salaries and vacation		545,970	668,359
Other accrued liabilities		67,453	32,418
Current portion of long-term debt	4	65,131	64,355
Deferred membership revenues	1	293,281	240,018
Deferred grant revenue	5, 7	1,950,000	—
Total current liabilities		3,733,358	1,549,016
<b>WORKERS' COMPENSATION LIABILITIES</b>		226,402	242,177
<b>COMMITMENTS</b>	6	—	—
<b>LONG-TERM DEBT</b>	4	227,427	167,380
<b>FUND EQUITY:</b>			
Contributed capital		28,430,677	28,430,677
Unrestricted retained earnings		(477,970)	21,937
Restricted retained earnings		185,803	182,099
Total fund equity		28,138,510	28,634,713
<b>TOTAL LIABILITIES AND FUND EQUITY</b>		<b>\$32,325,697</b>	<b>\$30,593,286</b>

See accompanying notes to financial statements.

## STATEMENTS OF FUND EQUITY FOR THE YEARS ENDED JUNE 30, 1989 AND 1988

	Contributed Capital	Unrestricted Retained Earnings	Restricted Retained Earnings			Total Fund Equity
			Monorail	Gifts	Total	
BALANCE AT JUNE 30, 1987	\$28,430,677	\$ 662,812	\$161,479	\$ —	\$161,479	\$29,254,968
Excess (deficiency) of revenues over expenses	—	(637,321)	(15,700)	32,766	17,066	(620,255)
Transfers	—	(3,554)	—	3,554	3,554	—
BALANCE AT JUNE 30, 1988	28,430,677	21,937	145,779	36,320	182,099	28,634,713
Excess (deficiency) of revenues over expenses	—	(499,907)	(3,843)	7,547	3,704	(496,203)
BALANCE AT JUNE 30, 1989	\$28,430,677	\$(477,970)	\$141,936	\$43,867	\$185,803	\$28,138,510

See accompanying notes to financial statements.

# FINANCIAL STATEMENTS

## STATEMENTS OF REVENUES AND EXPENSES FOR THE YEARS ENDED JUNE 30, 1989 AND 1988

	Notes	1989	1988
<b>OPERATING REVENUES:</b>			
Admissions		\$2,076,480	\$1,885,023
Net sales		1,808,575	1,728,952
Other		725,738	644,207
Total revenues		4,610,793	4,258,182
Less cost of goods sold		(450,325)	(442,638)
Gross margin		4,160,468	3,815,544
<b>OPERATING EXPENSES:</b>			
Purchased services		706,351	686,977
Salaries and fringe benefits	7, 8	5,557,717	5,681,918
Depreciation		1,178,640	1,133,988
Supplies and materials		881,548	674,066
Utilities		835,570	826,760
Other		882,717	704,088
Total operating expenses		10,042,543	9,707,797
<b>OPERATING LOSS</b>		<b>(5,882,075)</b>	<b>(5,892,253)</b>
<b>NONOPERATING REVENUES (EXPENSES):</b>			
Grants	7	4,953,217	4,899,586
Investment income		437,290	432,547
Loss on disposal of assets		(4,635)	(60,135)
Net nonoperating revenues		5,385,872	5,271,998
<b>EXCESS DEFICIENCY OF REVENUES OVER EXPENSES</b>		<b>\$ (496,203)</b>	<b>\$ (620,255)</b>

See accompanying notes to financial statements.

## STATEMENT OF CHANGES IN FINANCIAL POSITION FOR THE YEARS ENDED JUNE 30, 1989 AND 1988

	1989	1988
<b>CASH PROVIDED FROM (APPLIED TO) OPERATIONS:</b>		
Deficiency of revenues over expenses	\$ (496,203)	\$ (620,255)
<b>Changes in components of working capital and noncash items:</b>		
Decrease (increase) in current assets: Accounts and grants receivable	(1,751,455)	(186,261)
Inventories	(81,391)	13,544
Increase (decrease) in current liabilities: Accounts payable	267,657	306,585
Accrued salaries and vacation and other liabilities	(87,354)	(89,298)
Deferred revenues	2,003,263	(4,784)
Increase (decrease) in workers' compensation liability	(15,775)	242,177
Depreciation	1,178,640	1,133,988
Loss on disposal of assets	4,635	60,135
Total items to be added	1,518,220	1,475,726
Total cash provided from operations	1,022,017	855,471
<b>OTHER CASH PROVIDED:</b>		
Cash received on asset disposals	—	201
Increase in debt	130,926	191,819
Total other cash provided	130,926	192,020
<b>TOTAL CASH PROVIDED</b>	<b>1,152,943</b>	<b>1,047,491</b>
<b>CASH APPLIED:</b>		
Reduction of debt	70,103	50,965
Investment in fixed assets	2,136,936	791,666
Total cash applied	2,207,039	842,631
<b>NET INCREASE (DECREASE) IN CASH AND RESTRICTED CASH</b>	<b>(1,054,096)</b>	<b>204,860</b>
<b>CASH, TEMPORARY CASH INVESTMENTS, AND RESTRICTED CASH, BEGINNING OF YEAR</b>	<b>3,481,367</b>	<b>3,276,507</b>
<b>CASH, TEMPORARY CASH INVESTMENTS, AND RESTRICTED CASH, END OF YEAR</b>	<b>\$2,427,271</b>	<b>\$3,481,367</b>

See accompanying notes to financial statements.

# FINANCIAL REVIEW

## INDEPENDENT AUDITORS' REPORT

The Board of Directors  
Minnesota Zoological Garden

We have audited the balance sheets of the Minnesota Zoological Garden as of June 30, 1989 and 1988 and the related statements of revenues and expenses, fund equity, and changes in financial position for the years ended June 30, 1989 and 1988. These financial statements are the responsibility of the Zoo's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such financial statements present fairly, in all material respects, the financial position of the Minnesota Zoological Garden as of June 30, 1989 and 1988 and the results of its operations and the changes in its financial position for the years ended June 30, 1989 and 1988, in conformity with generally accepted accounting principles.

*Deloitte Haskin + Sells*  
Deloitte Haskin & Sells

September 29, 1989

## NOTES TO FINANCIAL STATEMENTS

FOR THE YEARS ENDED JUNE 30, 1989 and 1988

### 1. SUMMARY OF SIGNIFICANT ACCOUNTING AND REPORTING POLICIES

**Basis of Presentation**—The reporting policies of the Minnesota Zoological Garden conform to generally accepted accounting principles (GAAP) as prescribed by the Governmental Accounting Standards Board (GASB).

**Reporting Entity**—The Minnesota Zoological Garden was created by the Minnesota State Legislature as a state agency in 1969. It is a component enterprise fund unit of the State of Minnesota. Its operations are controlled by the state zoological board. The Minnesota Zoological Garden exists for the collection, habitation, preservation, care, exhibition, examination, and study of wild and domestic animals.

**Basis of Accounting**—The financial statements of the Minnesota Zoological Garden are prepared using the accrual basis of accounting. Revenues are recognized when they are earned, and expenses are recognized when they are incurred.

**Inventories**—Inventories are valued at the lower of cost (moving average) or market.  
**Restricted Assets**—The Minnesota Zoological Garden, in accordance with the original construction contract for the monorial, is required to maintain a restricted cash account, for a period of ten years ending September 20, 1989, to pay the professional liability and completed operations insurance for the builder of the monorial. Any remaining balance in the account on September 21, 1989 becomes the property

of the zoo fund. These funds are invested in cash equivalents. The Minnesota Zoological Garden has received gifts which are restricted for use by the donor.

**Animal and Horticultural Collections**—Detailed records of the historical cost of the animal and horticultural collections are not maintained, since it is not practical to determine such costs. Accordingly, these assets are recorded as expenses when incurred.

**Property, Plant, and Equipment**—Fixed assets are stated at cost or, for donated assets, at fair market value at the date of transfer. Depreciation is computed on the straight-line basis over the estimated useful lives of the assets. Projects under construction are accounted for as construction-in-progress until completion, at which time the cost of the asset is depreciated over its estimated useful life. Estimated useful lives are as follows:

Buildings	20-40 years
Improvements	20 years
Equipment	5-15 years

**Compensated Absences**—Employees accrue vacation, sick leave, and compensatory leave at various rates within limits specified in collective bargaining agreements. Such leave is liquidated in cash primarily only at the time of termination from employment.

**Deferred Membership Revenue**—Memberships to the Minnesota Zoological Garden are sold throughout the year and expire one year from the date of issue. Membership entitles the subscriber to free admission to the Zoo, discounts on gift store merchandise, and a subscription to the Minnesota Zoo Magazine. Revenue from the sale of memberships is recognized pro rata over the fiscal year.

### 2. CASH AND INVESTMENTS

Cash and investments from all funds in excess of operating requirements are pooled for deposit and investment purposes with the State of Minnesota. The cash belonging to the Minnesota Zoological Garden is part of one pool, totaling approximately \$8.2 billion and \$2.1 billion at June 30, 1989 and 1988, respectively. Investment earnings of the pool are allocated to the individual funds where provided by statute. Since the Minnesota Zoological Garden's deposits are pooled with other independent funds, the Zoo's investments are not specifically identified.

Nearly all of the State's investing is managed by the Minnesota State Board of Investment (MSBI), Minnesota Statutes, Section 11A.24 broadly restricts investments to obligations and stocks of U.S. and Canadian governments, their agencies and their registered corporations; short-term obligations of specified high quality; restricted participation as a limited partner in venture capital, real estate or resource equity investments; and, restricted participation in registered mutual funds.

The investments of the State are segregated into three categories to provide an indication of the level of risk assumed as of June 30, 1989 and 1988.

Risk category 1 includes investments that are insured or registered, or for which the securities are held by the State or its agent in the State's name. The State has no investments in risk category 2 which otherwise would include uninsured and unregistered investments for which the securities are held by the counterparty's trust department or agent in the State's name. Risk category 3 includes uninsured and unregistered investments for which the securities are held by the counterparty or by its trust department or agent but not in the State's name. The State's investment risk (for repurchase agreements) is reduced by an MSBI policy that limits transactions to those with primary government securities dealers and, in cases where collateral is held by the dealer (risk category 3), only primary dealers whose net excess capital is greater than \$200 million.

The repurchase agreements which are carried at cost are secured by securities which conform to the restrictions of Minnesota Statutes, Section 11A.24 (discussed above) and have a market value at least equal to the repurchase agreements principal. Collateral for repurchase agreements in risk category 3 are held and owned by the

## FINANCIAL REVIEW

counterparty until final settlement; collateral for repurchase agreements in risk category 1 are held by an agent of the State in the State's name. Other short-term investments are also carried at cost.

As of June 30 1989, all pooled investments are in risk category 1. The investments consist of government obligations, corporate stock, corporate obligations, commercial paper, and repurchase agreements. The market value of the securities in the investment pool exceeded cost.

As of June 30, 1988, substantially all category 1 investments consist of government obligation, corporate obligations, commercial paper, and other investments which represent 96% of the total investment balance. Category 3 investments consist of repurchase agreements, which represent 4% of the total investment balance. The market value of the securities in the investment pool approximated cost.

Cash and investment balances are as follows:

	June 30,	
	1989	1988
Minnesota Zoological Garden's share of the investment pool	\$2,221,268	\$3,279,068
Imprest funds	20,200	20,200
<b>Total</b>	<b>\$2,241,468</b>	<b>\$3,299,268</b>

### 3. PROPERTY, PLANT, AND EQUIPMENT

A summary of changes in property, plant, and equipment follows:

	Balances		Additions	Dispositions	Balances	
	7/1/88	6/30/89			6/30/89	6/30/88
Land	\$ 1,218,111				\$ 1,218,111	
Buildings and improvements	31,417,180	\$1,024,353			32,441,533	
Equipment	3,795,987	239,917	\$(10,133)		4,025,771	
Construction-in-progress	217,905	962,630	(86,802)		1,093,733	
Total property	36,649,183	2,226,900	(96,935)		38,779,148	
Accumulated depreciation	(10,190,594)	(1,178,640)	2,336		(11,366,898)	
Net property, plant, and equipment	\$26,458,589	\$1,048,260	\$(94,599)		\$27,412,250	

	Balances		Additions	Dispositions	Balances	
	7/1/87	6/30/88			6/30/88	6/30/87
Land	\$ 1,218,111				\$ 1,218,111	
Buildings and improvements	31,288,998	\$ 128,182			31,417,180	
Equipment	3,463,108	445,579	\$(112,700)		3,795,987	
Construction-in-progress		217,905			217,905	
Total property	35,970,217	791,666	(112,700)		36,649,183	
Accumulated depreciation	(9,108,970)	(1,133,988)	52,364		(10,190,594)	
Net property, plant, and equipment	\$26,861,247	\$(342,322)	\$(60,336)		\$26,458,589	

Property purchased under capital lease arrangements includes equipment of \$105,107 and \$96,630 at June 30, 1989 and 1988, respectively. Accumulated amortization on these assets is \$42,152 and \$25,020 at June 30, 1989 and 1988, respectively.

### 4. LONG-TERM DEBT

A summary of long-term debt follows:

	June 30,	
	1989	1988
City of Apple Valley water main assessment, semiannual installments of \$6,895, including interest at 8% through November 2004.	\$112,316	\$ -
Installment loan to State Department of Administration for the purchase of a telephone system, monthly installments of \$2,826, including interest at 4% through September 1992.	108,867	141,527
City of Eagan sewer assessment, annual installments \$10,181 plus interest at 8%, through May 1990.	10,181	20,363
Capital lease obligation for the purchase of computer hardware and software; monthly installments of \$2,025, including interest at 7.3% to 12.1% through September 1991, secured by computer hardware and software.	48,001	65,797
Capital lease obligation for the purchase of two copiers, monthly installments of \$594, including interest at 9.8% and 11.0% through July 1991 secured by the copiers.	13,193	4,048
Total long-term debt	292,558	231,735
Less current maturities	(65,131)	(64,355)
	<b>\$227,427</b>	<b>\$167,380</b>

Principal payments on long-term debt are as follows:

Year ending June 30,	
1990	\$65,131
1991	65,052
1992	43,780
1993	16,163
1994	5,706

### 5. DEFERRED GRANT REVENUE

Deferred grant revenue consists of:

	June 30, 1989
International Dairy Queen grant for the Coral Reef exhibit	\$ 750,000
State of Minnesota grant for the renovation of the whale tank	1,200,000
	<b>\$1,950,000</b>

The Dairy Queen grant is a challenge grant. The State of Minnesota appropriated \$750,000 to match the grant during the 1989 legislative session. Revenue will be recognized for both grants as expenses are incurred.

### 6. COMMITMENTS

The Minnesota Zoological Garden entered into purchase commitments of \$1,314,000 during July and August of 1989 for the construction of the Coral Reef exhibit.

### 7. RELATED PARTIES

The appropriation to the Minnesota Zoological Garden from the State of Minnesota was \$4,454,000 in 1989 and \$4,548,600 in 1988. During the 1987 Legislative session, the State appropriated a \$500,000 matching grant to the Minnesota Zoological Garden for contributions raised by June 30, 1989. Contributions of \$225,000 were raised during 1988 and a receivable from the State was recorded at June 30, 1988 for the grant. During 1989, the remaining contributions were raised and the State paid the grant. During 1989, the State appropriated \$1,200,000 to be spent for renovation of

## FINANCIAL REVIEW

the whale tank. These funds are available until expended. A receivable and deferred revenue have been recorded for this appropriation at June 30, 1989. The Minnesota Zoological Garden reimbursed the State \$129,951 in 1989 and \$65,700 in 1988 for indirect costs. Salary supplements of \$136,663 and \$66,200 were received from the State during 1989 and 1988, respectively.

### 8. RETIREMENT PLANS

All full-time employees and certain part-time employees of the Minnesota Zoological Garden participate in one of two pension plans administered by the Minnesota State Retirement System (MSRS): the general (defined benefit) or the unclassified service (defined contribution) pension plans.

#### A. DEFINED BENEFIT PLAN—General Plan

**Plan Description** Requirements for normal retirement benefits for members of the general plan are as follows:

- When age 55 and the individual has 5 years of allowable service, an annuity reduced from age 65 is payable.
- When age 62 and the individual has 30 years of allowable service, full unreduced normal annuity is payable.
- Only one year of allowable service is needed if employed to age 65 or later to receive the full unreduced normal annuity.
- An employee age 55 or over as of December 31, 1986, whose age plus length of service credit as of December 31, 1986 equals 85 or more, receives full benefits if the employee has filed a valid annuity application and has retired before July 1, 1987.

The fund also provides various death and disability benefits, whereby the disabled employee or surviving spouse is entitled to receive amounts determined by the fund.

**Contributions Required and Made** Covered employees are required by State statute to contribute a fixed percentage of their gross earnings to the pension plan. The Minnesota Zoological Garden makes annual contributions to the pension plan equal to the amount required by State statutes. Current contribution rates for the plan are 3.73% for employees and 3.90% for the employer. Total contributions made during fiscal year 1989 amounted to \$326,545, of which \$158,059 was made by employees and \$168,486 was made by the Minnesota Zoological Garden. Total contributions made during fiscal year 1988 amounted to \$308,979, or which \$143,526 was made by employees and \$165,453 was made by the Minnesota Zoological Garden.

**Funding Status and Progress** The "pension benefit obligation" is a standardized disclosure measure of the present value of pension benefits, adjusted for the effects of projected salary increases and step-rate benefits, estimated to be payable in the future as a result of employee service to date. The measure, which is the actuarial present value of credited projected benefits, is intended to help users assess the MSRS's funding status on a going-concern basis. Assess progress made in accumulating sufficient assets to pay benefits when due, and make comparisons among Public Employee Retirement Systems and employers. The MSRS does not make separate measurements of assets and pension benefit obligation for individual employers.

The pension benefit obligations of the MSRS based on the most recent valuations available, were as follows (in millions):

	June 30,	
	1988	1987
Total pension benefit obligations	\$1,775	\$1,894
Net assets available for benefits at market	1,725	1,704
Unfunded pension benefit obligations	\$ 50	\$ 190

The actuarial calculations of annual contributions include amounts that would be required to achieve full (100 percent) funding by the year 2011.

The measurement of the pension obligations is based on an actuarial valuation

as of June 30, 1988 and 1987. Net assets available to pay pension benefits were valued as of June 30, 1988 and 1987.

The Minnesota Zoological Garden's contribution for the period ended June 30, 1989 and 1988 to MSRS plans represented less than .5% of total contributions required of all participating entities.

Year-over historical trend information is presented in MSRS's Comprehensive Annual Report for the year ended June 30, 1988. This information is useful in assessing the pension plan accumulation of sufficient assets to pay pension benefits as they become due.

**Related-Party Investments** During 1989 and 1988, MSRS held no securities issued by the Minnesota Zoological Garden or other related parties.

#### B. DEFINED CONTRIBUTION PLAN—Unclassified Service

**Plan Description** Four Minnesota Zoological Garden employees participate in the MSRS Unclassified Service plan. In this defined contribution plan, benefits depend solely on amounts contributed to the plan plus investment earnings. Eligible employees participate from date of employment. Participating employees are required by State statute to contribute 4% of their gross earnings to the pension plan, and the Minnesota Zoological Garden is required to contribute an amount equal to 6% of such earnings. The Minnesota Zoological Garden's contributions for each employee and allocated investment earnings are fully vested immediately.

The Minnesota Zoological Garden's total payroll and the contributions relating to this plan in 1989 and 1988 were not material. All contributions were made as required by State statute.

### 9. DEFERRED COMPENSATION PLANS

Fifteen Minnesota Zoological Garden employees participate in the deferred compensation plans created in accordance with Internal Revenue Code Section 457. The plans, available to all Minnesota Zoological Garden employees, permit them to defer a portion of their salary until future years. The deferred compensation is not available to employees until termination, retirement, death, or unforeseeable emergency.

All amounts of compensation deferred under the plans, all property and rights purchased with those amounts, and all income attributable to those amounts, property, or rights are (until paid or made available to the employee or other beneficiary) solely the property and rights of the Minnesota Zoological Garden (without being restricted to the provisions of benefits under the plan), subject only to the claim of the Minnesota Zoological Garden's general creditors. Participants' rights under the plans are equal to those of general creditors of the Minnesota Zoological Garden in an amount equal to the fair market value of the deferred account for each participant. Amounts relating to these plans are not reported on the Minnesota Zoological Garden's balance sheet, but only in the Agency Fund of the State.

The Minnesota Zoological Garden has no liability for losses under the plans but does have the duty of due care that would be required of an ordinary prudent investor. The Minnesota Zoological Garden believes that it is unlikely that it will use plan assets to satisfy the claims of general creditors in the future.

