

To: Board of Management

From: William A. Rapley, D.V.M., M.Sc.
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Conservation, Education & Wildlife

Subject: **CONSERVATION MESSAGES**

Date: 2013-06-24

Summary:

At its meeting on 2012-12-18, the Board requested staff to report back on how conservation messages can be increased at the Zoo. This report is intended to address this motion while also highlighting the Conservation, Education, and Wildlife Strategic Plan recently updated. There are a number of tools, including the annual On-Site Visitor Survey, that serve to guide conservation messaging at the Toronto Zoo. Through an integrated effort, centred in the Conservation, Education & Wildlife Division but working with all Zoo staff, there is a broad array of educational events and programs designed, promoted and delivered throughout the year both on and off site. This report gives an overview of these educational programs, their conservation messages and desired behavioural outcomes.

Recommendations:

It is recommended that this report be received for information.

Background:

At the Board of Management meeting on 2012-12-18, the Board discussed the 2012 On-site Visitor Survey and in particular, several survey questions about visitor perceptions regarding the Zoo's conservation messages. The Board requested staff to report back on how conservation messages can be increased at the Zoo. This report is intended to address this motion while also highlighting the Conservation, Education, and Wildlife Strategic Plan recently updated.

Each year Member & Guest Services staff complete an on-site visitor survey during the months of July and August. The research objective of the visitor survey is to measure overall customer satisfaction and value with the Zoo visit. The study has been repeated during each summer season since 1996. The study evaluates a number of attributes including customer service, food and retail, animal exhibitry, signage and wayfinding, animal demonstrations and site conditions.

Beginning 2011, the annual visitor surveys were used to gain an initial understanding of how people view the Zoo, what knowledge / messages they are taking away, and whether these messages are having an impact towards inspiring conservation actions. Two questions were added to the survey as follows:

How would you rate the Toronto Zoo as:

- a) a conservation education facility?
- b) a place to see animals?
- c) a place to explore nature/connect with wildlife from around the world?
- d) a leader in wildlife conservation?

Results were:

97.1% of respondents rated the Zoo as "good to excellent" as a "conservation education facility." 86.9% rated the Zoo as "good to excellent" as "a place to see animals". 98.0% rated the Zoo as "good to excellent" as a "safe place to explore nature and connect with wildlife from around the world." And 95.6% rated the Zoo as "good to excellent" as a "leader in wildlife conservation".

What conservation action did you learn today that you will follow up on?

The most common responses were: recycle, cell phone recycling, no straws, and “didn’t pay attention.” Other responses ranged from endangered species, respect animals / habitats, to green roofs / green practices in urban areas, conserve water, save the rainforest / cutting of trees, and global warming to name a few.

The 2011 survey also included a rating on the attribute of “learned something new” (first introduced in 2009) with the results being the following:

Percentage	Excellent (5)	Very Good (4)	Good (3)	Below Average (2)	Poor (1)	Average Rating
Learned something new 2011	68.6	22.7	7.2	1.5	0.0	4.35
Learned something new 2010	56.5	29.6	11.6	0.9	1.4	4.19
Learned something new 2009	63.8	28.2	6.6	0.9	0.5	4.41

In 2012, these particular survey questions were examined and revised in order to try and get a better sense of *where* people are picking up most on conservation messaging and what medium is most effective, i.e. interaction with staff / volunteers, keeper talks, Waterside Theatre shows, or graphics and signage, etc. This was intended to provide a better idea of where efforts are successful and thus, where energies should be focused. With the survey already quite extensive in an effort to gain information on a variety of areas, wording of the initial proposed questions were revised / shortened to the following:

Q28: Did you hear a conservation message/action today?

Results were:

- Yes - 15.2%
- No - 84.8%

Q29: Where was the conservation message / action heard? (e.g. at a keeper talk, animal show, on zoomobile, talking to volunteer or staff, etc.)

Results were:

Zoomobile - 27.1%

Signs / ads / posters - 11.6%

On garbage / trash cans - 7.8%

All over - 8%

African Rainforest / Gorilla - 6.2%

Polar bears - 5.4%

Others / miscellaneous mentions - 28.9%

Don't know/ don't remember - 5%

The 2012 survey also included some additional attributes that were incorporated into an existing question outlined below along with the results.

How would you rate the following "attributes"?

Percentage	Excellent (5)	Very Good (4)	Good (3)	Below Average (2)	Poor (1)	Average Rating
Educational Value (New 2012)	55.7	30.9	11.6	1.7	0.1	4.40
Graphics/Animal Exhibit Signs (New 2012)	51.2	34.6	10.9	2.7	0.5	4.33
Learned something new 2012	79.7	16.9	3.4	0.0	0.0	4.76

Comments/Discussion:

In examining the survey responses over the past few years, it appears that visitors view the Zoo as “a safe place to explore nature and connect with wildlife from around the world” (98%) and also see the Zoo as a “conservation education facility” (97.1%). As indicated by some of the open ended responses, a variety of conservation messages are being relayed to visitors through varying means (Zoomobile, signs/ads/posters, even waste receptacles), and efforts should continually focus on doing so. On the attribute of “educational value,” the Zoo scores 4.4 out of 5 (88%) and in terms of “learned something new” the overall rating was 4.76 out of 5, the highest in the past four years.

In reviewing the 2012 survey results and question #28 in particular, there is some concern as to whether the wording of the question may have had an impact on visitors’ interpretation and responses. For example, whether use of the word “hear” may have perhaps impacted the results, leading people to only respond with a “yes” if they actually heard an auditory conservation message (e.g. via conversing with a staff/Volunteer, listening to a Meet the Keeper talk, attending an Animal Show, riding the Zoomobile, etc.) versus receiving a conservation message through signage or interactive activities. In addition, use of the words “conservation message” can have a multitude of meanings ranging from recycling/energy savings to climate change and protecting habitats and wildlife. Thus, some visitors may not have felt they *heard* a

“conservation message”. Also, as indicated earlier, due to the lengthy nature of the survey, these questions had to be revised from their original format/level of detail. As a result, they may not have been appropriately aimed at effectively capturing the data intended.

As with any survey, it is critical that the right questions are being asked and appropriate wording used so that visitors can clearly understand what is being communicated and appropriately respond. As such, further effort has been made to provide input and expertise in this regard for the 2013 survey. It is also imperative moving forward, to assess whether this annual visitor survey is truly the best means of collecting this sort of information or whether separate more tailored research would be more appropriate.

In addition to the annual On-Site Visitor Surveys, over the past couple of years Toronto Zoo has supported a number of individuals working on specific projects related to visitor-based research and assessing/evaluating educational activities on site. These include:

- **Katie Roe, Ph. D. Researcher from Murdoch University, Western Australia.** “**Zoo Education: A Comparative International Study of Zoo Intentions and the Visitor Experience**”. She hopes to develop understandings about the ways zoos communicate with their visitors and how the visitors perceive those communications.
- **Dr. Mary Benbow, Associate Dean, University of Manitoba.** “**Conversations at the Zoo: Talking About Climate Change**”. Recently a number of zoos have constructed Arctic exhibits centred around polar bears. Mary believes such exhibits are attractive to visitors and can be used to focus visitors’ attention on climate change. Her research aims to evaluate the degree to which visitors are engaging with and responding to information about climate change, the Arctic and its ecosystems in this exhibit, thereby identifying the communication strengths and weaknesses in order to inform future climate change-focused zoo exhibits.
- **Chantal Barriault, Co-Director Science Communication, Senior Scientist, Research and Evaluation, Science North.** Her research is part of a PhD program at Curtin University in Perth, Australia, and is **aimed at refining the visitor learning behaviour framework for science centres that she developed for her Masters’ degree.** In particular, she is hoping to determine: a) whether the framework can be applied or modified to apply in zoos and aquaria where visitor interactions with “exhibits” is less physical, involves more social interaction, and where live animals are the focus of visitors’ attention, b) what is the nature of the learning that occurs when ‘breakthrough’ behaviours are elicited by an “exhibit” in a science centre, aquarium, or zoo.
- **Caleigh Farrell, Master’s student from the University of Western Ontario.** “**Investigating the Role of Zoos in Primate Conservation: An Analysis of Visitor Experience at the Toronto Zoo.**” She hopes to develop a better understanding of zoos as a learning environment and how they contribute to global conservation efforts (particularly those related to primates.)

- **James Schultz, Master’s Student from the University of Toronto (UTSC). “The Effect of Learner Motivations on the Success of Environmental Education.”** This particular study explores the motivations of visitors, satisfaction towards meeting those motivations, and connection to any intentions to adopt any new environmental behaviours as a result of a visit to the Zoo.
- **Kelly Bentley, Masters student from the York University and Toronto Zoo staff. “Visualizing Learning at Toronto Zoo.”** This project assesses the educational experiences of general Zoo visitors by gathering information about the physical, cognitive, and affective characteristics of their visit as they view, listen, read, act, and otherwise engage with the content of the Zoo (e.g. exhibits, signage, new media, architecture, wayfinding, attractions, services etc). The main source of data will be obtained by tracking participant groups’ movement and self-recorded responses as they create personalized travel journals of their Zoo visit via the Mobilytrip application, available on mobile devices. The goal of this study is to provide a better understanding of how and what learning takes place on the Zoo site. This information is important for evaluating the level of success of current offerings and revealing characteristics both of Zoo visitors (learners) and Zoo content that may enable us to better reach our visitors and achieve educational goals.

While surveys are an important means of providing data/feedback to guide conservation messaging and visitor experiences at the Zoo, they are only one component. From an overarching organizational perspective, there are a number of other tools in place that serve to guide conservation messaging.

The Toronto Zoo’s overall Vision and Strategy has a strong focus on education and connecting people to nature. The Toronto Zoo Strategic Plan identifies goals and objectives to deliver on our education strategy to “*offer compelling education and outreach experiences to inspire people to care about wildlife and protect habitats.*”

To ensure efforts are effective and co-ordinated, additional workshops were held to define an integrated Conservation, Education and Wildlife (CEW) Divisional Strategic Plan and to map out how the many programs and audiences we serve work in tandem to meet the Toronto Zoo’s overall Vision. (See Appendix A – Conservation, Education and Wildlife Strategic Plan Summary 2013)

Also guiding conservation and education activities is our **Conservation Education Mission Statement:** *Toronto Zoo will engage communities by providing the tools and knowledge to connect to nature and protect our natural world.* As identified in this mission, conservation education is much more than just relaying information. It’s about providing opportunities that will engage people to get outdoors and connect with nature and equipping them with the tools and knowledge, in the hopes that they will care enough to ACT as stewards for our planet. All educational experiences that we provide are designed to connect people to nature, to spark a curiosity and move people up the ladder towards caring and stewardship, towards making responsible decisions and ultimately taking ACTION that will ensure a sustainable future for people, plants, and animals. Action is the key outcome we want to achieve for people attending our programs/participating in our on-site experiences. As a result, a cross-section of CEW staff

examined all existing educational programs/experiences and as a collaborative effort identified the following target behaviours/actions as intended outcomes for anyone participating in these experiences:

Behavioral Outcomes (Target Actions) for Educational Programs/Activities:

1. Explore natural spaces and reconnect with the natural world.
2. View and use the Zoo as a partner in their personal growth and lifelong learning.
3. Donate personal resources (time, money, knowledge) to conservation initiatives.
4. Assist in the creation of wildlife habitat locally and/or globally.
5. Become a conscientious consumer of energy/materials/resources.
6. Share wildlife/Zoo experiences with others (spread the word) to encourage them to visit/get involved.
7. Advocate for the Zoo to build strong community ties and support.
8. Think critically and scientifically about conservation issues.

All programs currently and moving forward, are designed to evoke one or more of these identified target actions/behaviours. (For a full listing of programs and identified target actions see Appendix B – Programs / Activities and Behavioural Outcomes (Target Actions).

In addition to the abovementioned items, membership with professional entities such as: Canada's Accredited Zoos and Aquariums (CAZA), Association of Zoos and Aquariums (AZA), International Zoo Educators (IZE), Parks Canada, and numerous other partners, enable us to share best practices and various resources, while also ensuring that we are meeting the highest standards in wildlife care and education. We have also formed many partnerships with NGO's such as: Ontario Nature, Toronto and Region Conservation Authority (TRCA), Rouge Park, Earth Rangers, and institutions like the Royal Botanical Gardens (RBG), Royal Ontario Museum (ROM), and the Get to Know Program originally set up by Robert Bateman. Further, staff also participate in a variety of professional committees and networks, i.e. Education Alliance for a Sustainable Ontario (EASO), Biodiversity Education Awareness Network (BEAN), Back to Nature Network, and National Association of Interpretation (NAI). Comprised of a cross-section of members from government, NGO's, businesses/industry, and academia, these partnerships/networks serve to maximize our programs across the province and connect to funding opportunities, new technologies, and the latest trends, including updates/changes at the Ministry level with respect to curriculum, etc.

Conservation and education messages for all educational programs/experiences (including graphics) are broadly based around the key messages identified by the AZA Conservation Education Committee (see list below). More detailed messaging is influenced by the species and ecosystem/habitat represented in the collection, ties to specific local and/or global conservation

issues, Ontario curriculum (elementary and secondary), and based on the type of program, audience, and age level.

Toronto Zoo Key Conservation/Education Messages:

1) Life on Earth exists within an ecosystem and human beings are part of the ecosystem.

- Ecosystems are made up of interdependent relationships between groups of living things and their physical environment
- All life has intrinsic value
- An impact on any element of an ecosystem has ramifications throughout the ecosystem
- All living things are connected; we must learn to and embrace “living with wildlife”

2) Humans are responsible for dramatic changes to ecosystems at a rate unprecedented in Earth’s history.

- Growing human populations are putting more strains on resources
- Biodiversity is vital and it is being lost; HIPPO (acronym) Habitat Loss, Invasive Species, Population, Pollution, Over harvesting
- Biodiversity means variety of life on earth – essential and inspirational for human existence
- Climate change is a reality and steps must be taken to reverse the trend
- Once a species is lost, it’s gone forever

3) Through informed actions, we can positively impact ecosystems and the human condition.

- We *all* have a role to play, through our decisions, our actions
- Sustainable development is a desirable and viable pathway to the social, economic, and environmental health of the earth.

These key conservation/education messages tie back to the Zoo’s overall Vision and desire to connect people to wildlife, to recognize that all living things have a role to play in our world, and to inspire changes in attitudes, with the goal of having people take ACTION to protect wildlife and habitats. Through a roster of dynamic and exciting educational programs and on site events, we aim to provide opportunities where individuals/families can make that connection with nature, to spark a curiosity, an emotional connection, and to move people along the continuum towards caring and stewardship, towards making responsible decisions, and ultimately taking ACTION that will ensure a sustainable future for people, plants, and animals.

The Conservation, Education & Wildlife Division is comprised of a wide cross-section of staff dedicated to the care and conservation of wildlife species, both those in our collection and those in the wild. Through an integrated effort, not only amongst the CEW Division, but all Zoo staff, there are an enormous array of educational events and programs designed, promoted, and delivered throughout the year both on and off-site. From more formal education programs

designed to cover specific curriculum requirements for school audiences or Scouts/Guides, to non-formal public interest type programs such as family wolf howls, weekend children's programs and camps, extended to curatorial led programs that incorporate social marketing and target engagement of specific audiences with hands on or citizen science type activities, there is truly a wide cross-section in the educational experiences that we provide. There are also a variety of informal learning opportunities that may arise from simple activities such as: observing an animal in its exhibit, free play in the Dino Dig area or other interactives such as those of the Kids' Zoo, reading a graphic, listening to a keeper talk, the Zoomobile commentary, or interacting with a Volunteer at one of our many interpretive locations around the site. Through all these experiences and reaching our visitors, education is Zoo wide, with everyone having a role to play in helping visitors appreciate and better understand wildlife and developing a connection to nature. For additional information see "Conservation and Education Activities Report 2011-2012."

Conservation Messaging Short and Long-term Goals:

Highlighted below are both short and long term goals related to conservation messaging as supported by the CEW Strategic Plan:

Short-term:

- Continue to ensure that conservation messages and interpretive techniques are up to date and relevant as guided by Canada's Accredited Zoos and Aquariums (CAZA), Association of Zoos and Aquariums (AZA), National Association of Interpretation (NAI), etc.
- Ensure programming/messaging meets defined conservation education mission statement and identified target behaviours.
- Increase casual encounters with animals on-site (including conservation species where possible).
- Provide varying opportunities for engagement with visitors through volunteer interaction and / or other partners who can assist in the delivery of interactive activities and communication of conservation messages, e.g. Partnership with Parks Canada for the delivery of programming summer 2013.
- Develop and maintain community stewardship programs and projects to increase awareness for local habitat conservation issues (Adopt-a-Pond, Healthy Waters, Health Wildlife, etc.).
- Review final reports of visitor-based research studies as a means of assessing strengths and identifying shortfalls, and work towards developing strategies to address these and best accomplish identified goals.

- Continue to evaluate exhibits / displays for visitor suitability and educational value/experience.
- Include Marketing / Public Relations input for conservation education related questions on Annual Visitor Surveys and continue to collect feedback/statistics in this regard where appropriate.
- Provide training and resources to enable staff to provide optimum care and interpretation of the collections i.e. deliver additional interpretive training sessions for Wildlife Care staff and / or Curators on strategies to engage different audiences and relay conservation messages in a meaningful way at keeper talks, through signage, etc.
- Install a graphic at the front entrance that highlights Toronto Zoo's conservation efforts, particularly involvement in Species Survival Plans (SSP's) and success stories.
- Continue to work with Marketing / Public Relations to raise awareness in the community about the "hidden Zoo," and all the important conservation work the Zoo is involved in. Seek additional sources of funding to dedicate to conservation marketing to advertise the "hidden Zoo" to the general public via commercials, etc.
- Continue to deliver conservation events on site that highlight endangered species and/or conservation programs the Zoo is involved in to promote these to the public. e.g. Black-footed Ferret (BFF) Day, Spring Toad Festival, Party for the Planet, Red panda Awareness Day, etc.
- Increase use of social media (Facebook, Twitter, etc.) to disseminate conservation messaging to a broader audience.
- Provide conservation message(s) and project updates as content for website and PR/Media send outs.
- Continue to partner with other conservation organizations to showcase products, practices, etc. in helping businesses and individuals live in more sustainable ways.

Long-term:

- Increase productivity of Zoo education by increasing the number and expertise of Conservation, Education, and Wildlife staff delivering education programs.
- Provide interpretive areas in each of the pavilions and assign key messages/overall interpretive themes to each of these areas. Work towards and integrated Interpretive Plan.
- Develop a graphics plan for interpretive signs that are attractive, interactive, and effective at reinforcing key themes/messages.
- Increase funds to produce conservation interpretive materials.

- Continue to provide on-site focal nodes for Education for Sustainable Development.
- Create additional interactives for kids/families with simple pictorial graphics.
- Continue to identify things people can do at home to protect wildlife or wild spaces (must apply to diverse audiences and ages).
- Offer additional 'hands on' opportunities for visitors/different audiences to participate in conservation activities.
- Use social marketing techniques to move beyond education to promote behaviour change; provide community based social marketing training to staff.
- Encourage a stronger conservation ethic within cultural communities.
- Create a social marketing plan to make ESD realistic and relevant to visitors; develop marketing events with a science focus.
- All departments make education (internal and external, formal and informal) a priority.
- Incorporate links at exhibits to technology applications (e.g. QR codes which would then link to additional information sheets on the animal and/or a video of the keeper talk right on the spot, or specific conservation programs, etc.)
- Continue to establish partnerships with other organizations with similar mandates that can assist us in conservation efforts and communicating messaging with visitors.
- Continue to partner with various Universities/educational institutions regarding higher level research presentations.

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List of Attachments:

Appendix A – Conservation, Education and Wildlife Strategic Plan Summary 2013

Appendix B – Programs / Activities and Behavioural Outcomes (Target Behaviours)