



**Summative Evaluation of the
Strange Days on Planet Earth Website**

(Study 3)

Report
Prepared for

Sea Studios Foundation

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Introduction

Strange Days on Planet Earth combines a 4-part television series and outreach program produced by Sea Studios Foundation (SSF) for National Geographic Television and Film and Vulcan Productions, with funding from the National Science Foundation (NSF) and The David and Lucile Packard Foundation. The project comprises three primary components: a broadcast series, website, and a national consortium of informal learning institutions. The project team expects that through consistent messaging and content, these components, when integrated, collectively offer the public enriched opportunities to explore and learn about the environment and the emergence of Earth System Science, a relatively new multidisciplinary approach to studying the planet that involves the physical, life, and social sciences. In particular the project expects to impact the public in three ways, by: 1) Increasing interest in the subject of science and the environment; 2) Increasing engagement and further learning; and 3) Increasing understanding of the environment through Earth System Science.

Knight-Williams Research Communications (Knight-Williams), an independent evaluation firm specializing in the evaluation of science education media, conducted the summative evaluation for the *Strange Days on Planet Earth* project. The evaluation assessed the extent to which the project realized the informal science education goals described in the grant proposal to the National Science Foundation (NSF), which subsequently provided funding for the television series, outreach program, and independent evaluation.

This report presents findings related to an adult audience's experience with the project website: http://www.pbs.org/strangedays/index_flash.html.¹ The goal of the evaluation was to gather feedback from website visitors' who self-selected to visit the website and leave contact information on the site's feedback page. The evaluation was designed to examine visitors' perceptions of the website's overall appeal and clarity as well as their: use of the site, awareness and understanding of the series' environmental issues as presented at the site, and efforts to engage or act on these issues. Specific issues of interest to the project team included:

Appeal/clarity

- *What are visitors' reactions to the website with respect to overall appeal, production style, and approaches used to communicate the programming content?*
- *Do visitors feel the web programming is clear and has a good balance of information, science, and entertainment?*

Use/learning value

- *How much time do visitors spend on the website?*
- *Do visitors perceive the website increased their knowledge and understanding of the series issues?*
- *What component(s) of the website do visitors think are missing or expect they would find and didn't?*

¹ Knight-Williams' independent summative evaluation also included four additional studies focused on other aspects of the television broadcast series and outreach, including: Study 1 (an in-depth study of the television series and website with a recruited adult sample); Study 2 (a naturalistic post-series evaluation of the series, website, and local activities at a sample of consortium partner sites); Study 4 (an evaluation of the consortium partner workshop); and Study 5 (an evaluation of screening events held at a sample of consortium partner sites). Additional information about these studies can be requested from Dr. Valerie Knight-Williams at val@knightwilliams.com

Impact/action

- Do visitors take the “promise” and perceive the “promise” to be a valuable exercise?
- Do visitors pursue actions as a result of using the website and do they link to other websites?
- Do visitors have a preference for emotional or intellectual appeals in motivating them to take actions related to the series?

The findings from the evaluation will both provide implementation feedback to the project team so that revisions might be made for *Strange Days Ocean*.

Method

An online questionnaire was sent via email to all visitors of the *Strange Days on Planet Earth* website who provided contact information on the feedback page of the site between April and November 2005 and indicated they were willing to be contacted. As 136 email addresses were identified fitting this criteria, survey requests were emailed to a total of 136 email addresses. From this initial list of 136, 38 error messages were received. Therefore it is assumed that approximately 98 email addresses likely received the website survey invitation. From this eligible list of 98 website visitors, 50 respondents completed the survey, representing a response rate of at least 51%. As the evaluation aimed for a 50% response rate, this rate was on target with the evaluation expectation.

Analysis

Limited descriptive statistics were conducted on quantitative data generated from the evaluation. Content analyses were performed on the qualitative data generated in the open-ended questions. All analyses were conducted by two independent coders. Any differences that emerged in coding were resolved with the assistance of a third coder.

Respondent demographic and background information

A total of 50 visitors completed the online questionnaire. Table 1, on the following page, summarizes basic demographic and background information for the respondent group. The group included: a high percentage of females (62%), individuals of varying ages (17-66) with a mean age of 43, 14% minorities, and a majority of employed individuals (60%). Two-fifths of the group (44%) resided on the west coast of the US, while one-third (36%) lived in the central US, and one-fifth (20%) lived on the east coast of the US.

In terms of television viewing habits, the group included a combination of regular and sometime viewers of PBS programs and science/nature programs, with two-thirds or more of the group reporting they watched these programs on a daily or weekly basis. Four-fifths (80%) of the visitors had viewed at least one of the four episodes from *Strange Days on Planet Earth*. *Invaders* was the most frequently watched episode (80%), followed by *The One Degree Factor* (76%), *Predators* (72%), and *Troubled Waters* (60%).

Table 1
Respondent demographic and background information

Demographic/background Factors:	Categories	(n=50)
Gender:	Female	62%
	Male	32%
	Left blank	6%
Age:	Range	17-66
	Mean age	43
Occupational Status:	Retired	8%
	Homemaker	12%
	Student	14%
	Unemployed	0%
	Employed	60%
Educational Status:	Less than high school	0%
	high school or equivalent	16%
	Some college, but no degree	4%
	College graduate	42%
	Some graduate school	4%
	Completed graduate school	30%
Region of US presently lived in:	US Northeast	10%
	US North Central	22%
	South Atlantic	10%
	South Central	14%
	West	44%
Racial and ethnic background:	African-American/Black	4%
	Asian	4%
	Native American Indian or Alaskan Native	2%
	White	86%
	Left blank	2%
	Hispanic or Latino Origin	2%
Frequency of watching science/nature programs on television	Daily	20%
	Weekly	46%
	Monthly	18%
	Less than once a month	10%
	Never	2%
Frequency of watching PBS channel on television?	Daily	40%
	Weekly	34%
	Monthly	12%
	Less than once a month	8%
	Never	2%
Episodes of <i>Strange Day on Planet Earth</i> viewed:	Viewed at least one episode	80%
	<i>Invaders</i>	80%
	<i>One Degree Factor</i>	76%
	<i>Predators</i>	72%
	<i>Troubled Waters</i>	66%

Findings

Part 1

How, when, and for how long visitors visited the *Strange Days on Planet Earth* website

1.1 How visitors found out about the website

Visitors were asked to explain how they found out about the *Strange Days on Planet Earth* website. Table 2 summarizes the most frequently mentioned sources and the percentage of visitors citing each source. **The majority of the visitors (58%) found out about the website from the *Strange Days on Planet Earth* television series. A PBS television promotion was the next most frequently mentioned source, cited by one-quarter (24%) of the visitors. Nearly one-fifth each (18%) reported learning about the website from the PBS website or from a friend, family member, or colleague. Just under one-tenth (8%) said they found out about the website through a *Strange Days on Planet Earth* email announcement (epostcard).**

Table 2 How visitors found out about the website	
How visitors found out about the website:	Total (n=50)
<i>Strange Days on Planet Earth</i> television series	58%
PBS television promotion	24%
PBS website	18%
Friend/family/colleague	18%
<i>Strange Days on Planet Earth</i> email announcement (epostcard)	8%
National Public Radio (NPR)	4%
Television news or other promotion	4%
Local newspaper	4%
Science/environmental magazine	2%
While surfing the web for the local PBS website	2%
National circulation newspaper	0%
PBS print publication (program guide, newspaper)	0%
Other website	0%
Other radio	0%
Don't remember	4%

Smaller percentages of visitors found out about the website through: National Public Radio (4%), a television news or other promotion (4%), a local newspaper (4%), a science/ environmental magazine (2%), or when surfing the web for a local PBS station (2%). None of the visitors reported finding out about the website through the following sources: a national circulation newspaper, a PBS print publication (program guide, newspaper), or through other websites or radio programs not listed above. A small percentage of visitors (4%) couldn't remember how they found out about the website.

1.2. When visitors visited the website

Visitors were asked to identify the month(s) during which they visited the *Strange Days on Planet Earth* website. Their responses are summarized in Table 3.

Months when visitors visited the website:	Total (n=50)
October –November 2005	24%
August - September 2005	30%
June- July 2005	26%
May –April 2005	28%

The website did not receive substantially more traffic from the visitor group as a whole during any particular month.

The highest percentage of visitors said they visited the website during August-September 2005 (30%), followed by May-April 2005 (28%), June-July (26%), and then October-November 2005 (24%).

Eight percent (8%) of the visitors indicated they visited the website during two separate months.

1.3 The estimated amount of time visitors spent on the website

Visitors were asked to estimate how much time, in minutes, they spent at the website. Table 4 summarizes visitors' estimates.

The minimum amount of time reported at the site was 1 minute while the maximum amount of time was 200 minutes. The average amount of time spent on the website was 35 minutes.

The amount of time, in minutes, spent on the website:	Total (n=50)
Maximum	200
Minimum	1
Mean	35

Part 2

Visitors' assessment of the appeal, learning value, and motivational impact of the website

Visitors were asked to rate, on a scale from one to seven, how they felt about various aspects of their experience with the *Strange Days on Planet Earth* website, including the overall appeal of the site, whether the content was interesting or boring, whether the visuals were exciting or dull, whether the presentation was clear or confusing, whether the site was easy or difficult to navigate, and whether information was easy or hard to locate. Sections 2.1 – 2.7 present these findings.

2.1 Visitors' assessment of the overall appeal of the website

Visitors were asked to rate, on a scale from one to seven, how they felt about three aspects of the site's overall appeal, including how much they liked the site overall, whether they felt the content was interesting or boring, and whether they felt the site was visually exciting or dull. Table 5 shows the mean rating for each element they were asked to assess.

Table 5							
Visitors' assessment of the overall appeal of the website							
(Mean ratings, n=50)							
	1	2	3	4	5	6	7
Disliked overall						6.3	Liked overall
Boring content						6.3	Interesting content
Visually dull						6.2	Visually exciting

The visitor group as a whole was very positive about the overall appeal of the *Strange Days on Planet Earth* website (mean rating, 6.3). The group also generally agreed that website offered interesting content (mean, 6.3) and was visually exciting (mean rating, 6.2).

2.2 Visitors' assessment of the clarity and usability of the website

Visitors were asked to rate, on a scale from one to seven, how they felt about various aspects of the site's usability, including: whether the presentation was clear or confusing, whether the site was easy or difficult to navigate, and whether information was easy or hard to locate. Table 6 shows the mean rating for each element they were asked to assess.

Table 6								
Visitors feedback on the clarity and usability of the website								
(mean ratings, n=50)								
	1	2	3	4	5	6	7	
Confusing presentation						6.2		Clear presentation
Hard to use/navigate						6.1		Easy to use/navigate
Hard to locate information that interested me						6.0		Easy to locate information that interested me

Visitors generally agreed that the website offered a clear presentation (mean 6.2). Moreover, the group as a whole agreed it was easy to navigate the website (mean rating, 6.1) and that it was easy to locate information that interested them (6.0).

2.3 Visitors' assessment of the amount of information and science provided at the website

Visitors were asked to rate, on a scale from one to seven, how they felt about the density of information and science provided at the website. Table 7 and the following section summarize the mean ratings for each element.

Table 7								
Visitors' assessment of the amount of information and science provided at the website								
(Mean ratings, n=50)								
	1	2	3	4	5	6	7	
Too little information					5.2			Too much information
Too little science				4.3				Too much science

The visitor group as a whole felt the amount of information presented at the website was slightly on the heavy side (mean rating, 5.2). Visitors generally felt that the amount of science offered at the site, however, was about right (mean rating, 4.3).

2.4 Visitors' assessment of the overall learning value and motivational impact of the website

Visitors were asked to rate, on a scale from one to seven, their overall feelings about the learning value and motivational impact of the website, including: how much they felt they learned from the website, whether the website increased or decreased their understanding of threats facing the environment, whether the website increased or decreased their understanding of what they personally can do to help the quality of their environment, whether the website encouraged or discouraged them from taking action to improve the quality of the environment, and lastly whether the website left them feeling hopeful or hopeless about the environment. Table 8 summarizes the mean ratings for each of the above elements.

Table 8									
Participants' assessment of the overall learning value and motivational impact of the website									
(Mean ratings, n=50)									
		1	2	3	4	5	6	7	
Learned nothing							5.9	Learned a lot	
Decreased my understanding of the threats facing the environment							6.1	Increased my understanding of the threats facing the environment	
Decreased my understanding of what I personally can do to help the quality of the environment							5.7	Increased my understanding of what I personally can do to help the quality of the environment	
Discouraged me to take action to improve the quality of the environment							5.8	Encouraged me to take action to improve the quality of the environment	
Left me feeling hopeless about the environment							4.8	Left me feeling hopeful about the environment	

Visitors generally agreed that they learned a considerable amount from the website (mean rating, 5.9) and that the website increased their understanding of the threats facing the environment in particular (mean rating, 6.1). Visitors also agreed, although a little less enthusiastically as a whole, that the website both increased their understanding of what they personally could do to help the quality of the environment (mean rating, 5.7) and encouraged them to take action to improve the quality of the environment (mean rating, 5.8). Finally, visitors indicated that the website left them feeling somewhat more hopeful than hopeless about the environment (mean rating, 4.8).

2.5 How visitors felt after using the website

Visitors were asked to indicate, selecting from a variety of descriptors, which, if any, best reflected how they felt after using the website. Table 9 summarizes the descriptors visitors most frequently chose.

Visitors indicated that after using the website they experienced more than one emotion or mixed-emotions. The highest percentages of visitors said they felt motivated (56%), inspired (42%) or encouraged (40%). Other descriptors selected less frequently included: hopeful (32%), scared (32%), depressed (30%), pessimistic (22%) optimistic (18%), defeated (6%) and confused (2%).

Sixteen percent of the visitors (16%) wrote down a descriptor that did appear in the above list of options. Their additions included: “a mixture of the above,” “more informed,” “fatalistic,” “sad,” “annoyed,” “irritated,” “aggravated,” and “wanting more,” as explained in the context of their comments below:

- *Irritated with only one side presented in some cases*
- *Sad to see scientific info so "sexed up"*
- *Annoyed. felt there was more propaganda than science*
- *I compared it to the Nat'l Geographic issue on Global Warming of 2004.*
- *Just a mixture of all.*
- *Aggravated at people's lack of realization as to what they are doing to the environment.*
- *More informed.*
- *Fatalistic?*
- *Wanting to ask a scientific environmental of an expert*
- *Wanting to have the time to view more.*
- *More inspired to share this kind of info with my club to plant the seeds NOW in our youth*

Descriptors:	(n=50)
Motivated	56%
Inspired	42%
Encouraged	40%
Hopeful	32%
Scared	32%
Depressed	30%
Pessimistic	22%
Optimistic	18%
Defeated	6%
Confused	2%
Other: mixture of it all, more informed, fatalistic, sad, annoyed, irritated aggravated, wanting more	16%

2.6 What about the website stood out or left a lasting impression on visitors

Visitors were asked to describe what about the website most stood out or left a lasting impression on them, recognizing that it may have been some time since they last visited the website. Table 10 summarizes the features visitors most often identified.

Table 10	
What about the website most stood out for visitors	
Features that most stood out:	Total (n=50)
Depth/amount of information about environmental issues	34%
Focus on activism/actions/what can be done	30%
Presentation/layout – easy to use and understand	26%
Interactive features/activities	12%
Don't remember	10%
Edward Norton	6%
Magnifying glass	4%
Other	6%

All but one visitor described aspects of the website that most stood out for them in positive rather than negative terms. A little over one-third (34%) of the visitors pointed to the website's depth or amount of information about environmental issues, while not quite one-third (30%) were most impressed by the website's focus on activism and actions that can be taken to address the environmental issues featured in the series. A little over one-fourth (26%) of the visitors meanwhile were impressed by the site's easy to use and/or understandable presentation or layout.

Smaller percentages of viewers pointed to the following additional features: the interactive features and activities (12%), something about Edward Norton's appearance (6%), the magnifying glass (with one visitor finding this a valuable aspect of site while the other finding it lacking in value), or some other feature of the site (6%). Finally, one-tenth of the visitors (10%) stated that they couldn't remember what stood out most about the website or said that nothing left a lasting impression.

The following section presents these findings in greater detail, accompanied by visitor comments.

- **A little over one-third (34%) of the visitors mentioned that the website's depth and amount of information about environmental issues most stood out for them. While some viewers made this point in general terms, others discussed specific issues they**

enjoyed learning more about, particularly invasive species or global warming. The range of comments on this theme included:

- *The depth of information.*
- *It had good info.*
- *Information on invasive plants and animals.*
- *I thought that the information presented was good and in a proper sequence.*
- *I was looking for a counter to those who scoff at the idea that 1 degree raise in the global temp is significant. So, I was glad to see that issue tackled.*
- *In depth information, and topics to read on.*
- *Info on termites in New Orleans.*
- *Information in invasive plants and animals.*
- *It's quite extensive. I appreciated the background information on the series' professional advisors.*
- *The depth of information.*
- *I gathered information about invasive species and what we can do about them.*
- *The damage that these invading species have already done. And that this may be just the tip of the iceberg, of the long term costs and destruction they will cause.*
- *The sufferings of the animals.*
- *I was happy to learn about a new resource for environmental education, especially for my home-schooling child but I didn't find materials that he could use himself, just information written for a teacher.*
- *The education department, because I am a teacher and would like to talk to students about the issues related to the environment and our earth.*

- **About one-third (30%) of the visitors stated that the website's focus on activism or actions that could be taken to address the environmental issues featured in the series stood out most for them, as in:**

- *Well every time I unconsciously litter or use products in a way that could be damaging to the environments I always remember the strange days series and what it taught me about what is hurting our planet. It might seem corny, but I really do remember about the strange days series and the website that have an impression on me. I will most always pick up the litter and throw it in the garbage if I have unconsciously done that and sometimes I will cut back on how much water I waste or how much fossil fuels I burn.*
- *It was an awesome and informative web site... loved it. I was trying to use it as an educational tool for my students. I am a 4th grade teacher and also started and run an environmental club at my elementary school for 4th and 5th graders. I would love to have the series for us to watch as part of our Earth day/March conservation awareness month.*
- *I like the section that informs us what the problem is. I also like the suggestions on what we can do to help prevent the further spread. It was simple and easy to use.*
- *The reasons for why I should care about the issues. That was useful and nice to see. Got me thinking.*
- *The information made available, especially the lifestyle changes that people can make and actions they can take to decrease their contribution to the problems.*
- *The information about what I could do. Tips on taking actions. I was looking for information about what I could do. I found quite a bit actually.*
- *Info about why I should care and what I can do.*
- *I was pleased to see that mainstream, often somewhat banal National Geographic was doing in effect becoming ""activist"" on the environmental front. I am glad to see that there are more people out there that are concerned about the environment and nature.*

- *My deepest desire is to break the barriers of ignorance to those within my community and help enable this community become a better place to live. If I can reach beyond borders and small minds perhaps I can help in some small way.*
 - *I think about the trees and coyotes. The delicate relationship of taking one element/thing out because we don't want or like it. Replace it with some of our own logic and look it's a big mess. How sad our society really is to believe we can manipulate everything....We must wake up.*
 - *I am not a website person. I do occasionally have access to computers. This particular program on KCPT channel 19 caught my attention for I was at that time enrolled in a science class. I am still interested in learning as much as I can. Especially about ways to better communicate healthier choices concerning our environment.*
 - *How life on this planet is both fragile and powerful at the same time, and how just the simple task of going about our daily lives drastically affects the world around us.*
 - *Ditto for the series itself. The website took this one step further by inviting commitment and ideas.*
 - *I also had a sense of personal power to effect change.*
- **A little over one-fourth (26%) of the visitors felt that the site's easy to use and/or understandable presentation or layout most stood out, as in:**
 - *I liked the layout of the tabs for individual topics along the left side*
 - *Excellent graphics and easy-to understand information.*
 - *I like the way the site is laid out... the flash opening etc.*
 - *It is graphically appealing and done well; it is easy to move around.*
 - *Solid graphic design.*
 - *The organized fashion of the content.*
 - *Well composed.*
 - *It had good info that was easy to access.*
 - *How easy the site was to use.*
 - *Easy to understand and go to different subjects*
 - *Excellent graphics and easy-to understand information.*
 - *I thought that the information presented was good and in a proper sequence.*
 - *The information is up to date, interesting, and well formatted.*
 - **A little over one-tenth (12%) of the visitors were still impressed by the interactive features and activities offered on the website. For example:**
 - *It was very interactive.*
 - *The activities stood out.*
 - *The interactive pieces.*
 - *I loved the future house feature. You could go through the house, click on different things in a room and it would give you hints on how to make environmentally friendly choices. It was very interactive.*
 - *I liked the interactivity encouraging readers to send in their environmental improvement ideas.*
 - *"The 'Make a Promise' section. The 'Idea Exchange.'*
 - *The puzzle things (find the things in the rooms) did not work very well. Sometimes you would click on an item and it would not come up that you were right. You'd click on it again a little later and you would be right. I wish more people would have visited this website and watched the series.*
 - **One-tenth of the visitors (10%) of the visitors stated that they couldn't remember what stood out for them most or said that nothing left a lasting impression.**

- **Six percent (6%) of the visitors felt that something about Edward Norton’s appearance on the site still stood out most for them, as in:**
 - *Edward Norton’s face*
 - *Having Edward Norton’s face was helpful too because I could instantly see that this was the gentleman that hosted the program I watched*
 - *Kids are so deeply interested in this topic that my 10 year old tried writing to Edward Norton after the show; it would have been nice for him to have a place on the site to post him comments*
- **Four percent (4%) of the visitors stated that the magnifying glass on the website is what stood out, with one visitor finding this a valuable aspect of site while the other finding it lacking in value, as in:**
 - *The magnifying glass was definitely interesting.*
 - *A magnifying glass that does not magnify just shows pretty pictures that do not present any information. The web site is like the show - no information, just Hollywood type glitz.*
- **Finally, 6% of the visitors mentioned some other feature of the site, as in:**
 - *It’s quite extensive. I appreciated the background information on the series’ professional advisors.*
 - *Since receiving this email, I will undoubtedly check back to the website. Thanks for the informative series.*

2.7 Whether visitors felt anything was missing from the website

Visitors were asked to indicate whether they felt anything was missing from the website. If they checked yes, they were asked to describe what they felt was missing. Table 11 summarizes the percentage of visitors who felt something was missing from the website followed by brief explanations of the elements these visitors felt were missing.

Table 11 Whether visitors felt anything was missing from the website	
	(n=50)
No, the website seemed complete	66%
Yes, I felt the following things were missing:	18%
<i>More information/follow- up materials on topics</i>	14%
<i>Contact information to outside officials/experts</i>	10%
<i>Appropriate presentation style for younger viewers</i>	6%
<i>More incentive to fix environmental problems</i>	4%
<i>Sound/dialog</i>	4%
<i>More or improved interactive features</i>	4%
<i>Additional links to organizations</i>	4%
<i>Other</i>	6%
Left blank	16%

Two-thirds of the visitors felt the website seemed complete (66%), one-fifth (18%) felt something was missing, and 16% left the item blank. The two most frequently cited elements that visitors felt were missing from the site included more information/follow- up materials on specific environmental topics (14%) and contact information to outside officials/experts (10%).

Other suggestions included: more details on invasive species (6%), a more appropriate presentation style for younger viewers (6%), additional incentive/motivation to fix environmental problems (4%), sound/dialog (4%), more or improved interactive features (4%), and additional links to educational or conservation organizations (4%).

Additional details about each suggested element and examples of visitor comments follow.

- **Fourteen percent (14%) of the visitors mentioned that they felt more general information and follow-up materials would improve the website:**
 - *Also, if there were some way to have questions that go along with the series or follow up materials*
 - *Things that affect the planet, and humans*
 - *More about toxins impacting humans would be educational*
 - *Other indicator species used to determine changes- has anyone done research to the migration of pelicans in interior U.S.; how fast they have migrated northward as summer residents related to changing summer temps.*
 - *I think milfoil species should have been covered during the exotic species episode and website area. More people could have identified with this than the termites. I did not learn much because I am biology major and have covered all of this in school. Overall, for the general population, the website was good and informative. Now if only they would participate in the suggestions instead of excusing themselves for buying “cheap”.*
 - *More information on the other sides, for example, why are ranchers so adamant about being able to protect their livestock from invasive predators. City folks have no clue about what life is really like as a rural farmer. We are the ones to suffer when city people think it’s nice to have “cute” wolves, mountain lions and other predators around. They don’t see or refuse to acknowledge the horrific suffering on the livestock and the ranchers.*

- **One-tenth of the visitors (10%) mentioned that they wanted the website to include contact information to outside officials/experts who could answer questions they had, as in:**
 - *I would love to be able to contact one of the experts and get intelligent questions answered.*
 - *There needs to be more information on how we can maybe contact our state officials to spread the word so we CAN really make a difference, because maybe stricter laws and environmental issues need to be addressed to the government and get more people involved.*
 - *I wanted advice of environmental experts regarding “green” remodeling of my home.*

- **Another 6% stated that they felt a more appropriate presentation for younger viewers would improve the website:**
 - *I would love to see some of the information presented in a fashion that would be appropriate for younger viewers/readers*
 - *The main thing for me, watching with children, was for the show not to be too scary. My ten year old was frightened by it so you might want to make sure that it’s either not anymore dramatic or that you recommend that younger people not watch.*

- **Four percent (4%) of the visitors mentioned that they felt the website could include more incentives/motivations to fix the targeted environmental problems addressed in the series:**
 - *I thought there could have been a little more motivation on helping the environment we live in. I understand we as people must make that choice to better the world but on the site I just felt really bad about what we do to harm the things living on the planet and the future of the*

- human race. But since visiting the website I have not done much too at least fix the things in my life that could possibly have harmful effects on the environment.*
- *Make the items suggested meaningful for someone who is already using compact flour. Lights, eating locally, won't eat seafood at all, uses biodiesel, and has already upgraded house a insulation, replaced old appliances etc.*
- **Four percent of the visitors (4%) stated that they felt the sound and dialog was missing from the website, as in: *Sound; Add sound/dialog.***
 - **Another 4% of the visitors mentioned that they felt more or improved interactive features would enhance the website, as in:**
 - *A comment board for viewers, monitored if possible to remove crackpot comments.*
 - *It would have been great to have more interactive tools. As I am a college student and can get easily bored, more short clips or some sort of interactive tool. Not sure what, but would have made the website more interesting.*
 - **Another 4% of the visitors stated that they felt additional links to organizations which could further their knowledge on environmental issues or conservation efforts, would improve the website, as in:**
 - *Links for local groups that can personalize the efforts of national groups*
 - *Links to organizations that are doing good things. Sierra club, nrdc, usc, etc.*
 - **Lastly, three visitors stated that they felt something that could not be put into any specific category was missing from the website, as in:**
 - *Info about how to purchase these supplemental materials and videos would be great*
 - *Large enough link buttons not to miss them- Not TOO busy looking-*
 - *Not to be to confusing when login on the site.*

Part 3

Activities, promises, and links visitors pursued while at the website

3.1 Activities visitors pursued while at the website

Visitors were asked to identify any activities they did while at the website, choosing from 11 possible response options and an Other option. Table 12 summarizes the activities in which visitors most often engaged while on the website.

Table 12	
Activities visitors pursued at the website	
The list of activities:	Total (n=50)
Read more in-depth information about an episode	66%
Read “What do experts say?”	60%
Read “What can I do?”	60%
Read “Why should I care?”	54%
Read “How do I measure up?”	42%
Read about the series host Edward Norton	34%
Made a “Promise”	34%
Read about the producers	18%
Looked at the Educators Guide	14%
Participate in the “Idea Exchange”	10%
Looked at the glossary	8%
Other:	12%

The visitors reported engaging in a variety of activities while at the website and most respondents indicated they engaged in at least four different activities while at the site. The four most frequently mentioned activities were done by more than half of the visitor group and included: read more in-depth information about an episode (66%), read “What do experts say?”(60%), read “What can I do?” (60%), and read “Why should I care?”(54%).

Between one-fifth and two-fifths of less of the visitor group mentioned other activities, including, from highest to lowest frequency: read “How do I measure up?” (42%), read about the series host Edward Norton (34%), made a “Promise” (34%), and read about the producers (18%).

Smaller percentages of visitors reported looking at the Educators Guide (14%), participating in the “Idea Exchange” (10%), or looking at the glossary (8%). Finally, 12% of the visitors said they did something else at the site as follows:

- *Future house*
- *Left a comment*
- *Read the backgrounds of the advisors to the series*
- *Wanted to find links to take to members (teachers) at school to get our community moving more positively.*
- *We did not see this so cannot comment on any of the above.*
- *Wrote a letter.*

3.2 “Promises” visitors made at the website

Visitors were asked to identify, choosing from seven options, which promises if any they made while at the website. Table 13 summarizes the “promises” visitors said they made while at the website.

Sixty percent (60%) of the visitors indicated they made a “promise” while at the website and most of these visitors made more than one promise. The three most frequently cited promises were all cited by one-fifth or more of the visitors, and included: buy Energy Star appliances (26%), don’t release unwanted pets into the wild (24%), and use non-toxic alternatives to household chemicals (20%).

Other promises made by between one-tenth and one-sixth of the visitor group included: use only native plants in their garden (16%), clean their boat after use (12%), and eat only sustainable seafood (10%).

Very few visitors promised to buy certified forest products (6%) and only a couple of visitors couldn’t remember the promise(s) they made (4%).

Table 13 “Promises” visitors made at the website	
Promises:	Total (n=50)
Buy Energy Star appliances	26%
Don’t release unwanted pets into the wild	24%
Use non-toxic alternatives to household chemicals	20%
Use only native plants in your garden	16%
Clean your boat after use	12%
Eat only sustainable seafood	10%
Buy certified forest products	6%
I don’t remember which promise(s) I made	4%

3.3 How valuable visitors found the “promise” activity

Visitors were asked to rate, on a scale from one to seven, how valuable they found the “promise” activity. Table 14 summarizes the mean rating for this item.

Table 14 How valuable the “promise” activity was to visitors (Mean ratings, n=50)							
1	2	3	4	5	6	7	
Not at all valuable				5.7		Very valuable	

The evaluation found that the visitors as a whole felt the “promise” was a moderately valuable exercise (mean rating, 5.7). Visitors who made a promise tended to rate the exercise higher than those who didn’t make a promise.

3.4 Visitors’ use of links from the website

Visitors were asked if they used the *Strange Days on Planet Earth* website to link to any other websites or activities related to the series. They were also asked to briefly describe what they linked to if they checked yes. Table 15 summarizes whether or not visitors linked to other websites or activities followed by the links described by the visitors.

Nearly one-fifth (18%) of the visitors said they used the *Strange Days on Planet Earth* website to link to another website or activity related to the series. The sites visitors mentioned were:

- *"http://www.wws.princeton.edu/ota/disk1/1993/9325_n.html*
- *http://www.ucsus.org/invasive_species/call-to-action-on-invasive-species.html*
- *http://www.seafoodchoices.com/*
- *The sponsors, i.e. Ford, Packard, Vulcan.*
- *The zoo in the Puget Sound in Washington.*
- *More sites on invasive species.*
- *PBS home website to find out about other programming*
- *In a forum that I participate in.*

Table 15 Whether visitors used the website to link to other websites or activities	
	Total (n=50)
Yes	18%
No	82%

Part 4

Actions visitors took as a result of using the website and their suggestions for enhancing the website in this regard

4.1 Visitors' actions as a result of their experiences at the website

Visitors were asked to identify any actions they took as a result of their experience at the website, choosing from 15 possible options suggested at the website. Visitors who checked “none of the above” were asked to explain why they had not taken any actions. Table 16 summarizes the percentage of visitors who took each action.

Table 16 Actions visitors reported taking as a result of their experience on the website	
Visitors' reported actions:	Total (n=50)
Purchased or used non-toxic alternative to household chemicals	44%
Returned to the <i>Strange Days on Planet Earth</i> website to find additional information about the topic	38%
Replaced regular incandescent bulbs with energy-efficient bulbs	36%
Purchased energy efficient appliances	22%
Stopped dumping pollutants into my drains or sewers	18%
Chose/ate sustainable seafood (ate “lower on the food chain”)	18%
Joined or donated money to an environmental/conservation organization	16%
Checked the quality of water coming out of my faucets	16%
Chose a car wisely for fuel efficiency/low emissions	16%
Planted only local native plants, shrubs, and tree species in my garden	14%
Checked/monitored the water quality in my local community.	8%
Found out about organizations that compensate farmers and ranchers for damage done by large predators	6%
Found alternative arrangements for an unwanted pet rather than releasing it into the wild	4%
Bought certified forest products	2%
Rinsed boats and other watercrafts after use to reduce invasive species	2%
Other	16%

More than four-fifths of the visitors (84%) said they took some action as a result of their experience at the website. The four most frequently cited actions included: purchased or used non-toxic alternative to household chemicals (44%), returned to the *Strange Days on Planet Earth* website to find additional information about the topic (38%), replaced regular

incandescent bulbs with energy-efficient bulbs (36%), and purchased energy efficient appliances (22%).

Nearly one-fifth of the group each (18%) said they stopped dumping pollutants into their drains or sewers (18%) or chose/ate sustainable seafood (ate “lower on the food chain”). Sixteen percent each (16%) said they joined or donated money to an environmental/conservation organization, checked the quality of water coming out of their faucets, or chose a car wisely for fuel efficiency/low emissions. Fourteen percent (14%) said they planted only local native plants, shrubs, and tree species in their garden.

Less than one-tenth reported engaging in the following actions: checked/monitored the water quality in their local community (8%), found out about organizations that compensate farmers and ranchers for damage done by large predators (6%), found alternative arrangements for an unwanted pet rather than releasing it into the wild (4%), bought certified forest products (2%), and rinsed boats and other watercrafts after use to reduce invasive species (2%).

Finally, 16% of the visitors said they did an action that wasn’t provided in the checklist, including: talking to others/spreading the word, buying more organic or locally produced products, starting a school club, reading more about the issues, encouraging others to visit the website and watch the series, and volunteering for environmental improvement projects, as in:

- *Bought more organic produce and meat.*
- *Encouraged others to visit web site & watch show.*
- *I have been doing these things for years and continue to spread the word to others.*
- *Most of the suggestions we already do, one missing was eat locally produced food.*
- *Read more about the topic and talked to others about it and about the show.*
- *Still trying to get something going at school [club].*
- *Talked to friends/coworkers/family about the content of the series.*
- *Volunteered for an aquatic invasive specie reduction project*

Among the 16% of visitors who said they didn’t take an action, the main explanation was that they were already doing most of the applicable actions. While most of these visitors didn’t refer to the website in their explanations, two questioned the website’s credibility in some regard. Visitors’ responses included:

- *I already took many actions to defend and protect the animals and the environment. I give a lot of money to non-profits that protect wild and domestic animals.*
- *I can't pinpoint which of the above actions I took because of the show; I'm trying to do many of them these days.*
- *I consider myself an environmentalist who already does more than the average person.*
- *I'm already doing most of the applicable actions (I don't have a boat)*
- *My objection to your presentations and their drama has nothing to do with the political position. I already do all the environmental stuff I can, personally & politically. I just thought the presentations hysterical in their style. The situation is grave, true, our survival depends upon it. I thought the message was lost in the bang and swoosh of the productions.*
- *The home page presents a phony magnifying glass that shows me the site has no credibility. I do these things anyway.*

The next most commonly cited explanations involved the actions not being directly applicable or being actions visitors planned on doing but hadn't:

- *Nothing applied to my current lifestyle for me to change. Maybe more options and simpler things could have a larger impact with people doing less but more people active.*
- *There were things that I had planned on doing like replacing light bulbs, visit web site for further study, but just haven't done so yet.*
- *It's a slow process.*

4.2 Visitors' preference for intellectual vs. emotional appeals to motivate them to action

Visitors were asked an exploratory open-ended question that asked them to suggest possible improvements to the website that might encourage them to take actions related to the series. In particular the project team was interested in knowing whether visitors felt the website should feature intellectual or emotional appeals in this regard. The precise wording of the question provided by the project team was: *To help improve their site, the producers are interested in knowing more about what visitors like you feel you need to know or see in order to take the kinds of action listed above. What types of information, visuals, or appeals do you think should be included on the site to help motivate people to take some action related to the series? (For example, is it pictures of battered fur seals or facts about how toxins impact children's health? Is it an intellectual argument or an emotional one?).*

Table 17 summarizes the most frequent responses to this question.

- **Two-thirds (66%) of the visitors expected they were more likely to be prompted to action by an appeal that combined intellectual and emotional arguments. Several of these visitors specified that the appeal should begin with an emotional argument that then connects to or is backed-up by an intellectual argument (or set of facts). The range of visitor responses on this theme included:**

Table 17	
Visitors' preferences for intellectual vs. emotional appeals to motivate action	
Prefer:	Total (N=46)
Combined intellectual and emotional appeals	66%
Intellectual appeals primarily	14%
Emotional appeals primarily	12%
Other (not on point)	8%

- *Always, it needs to include the emotional element, but carefully, not in histrionics. I thought the scientific presentation of the series was extraordinary. Now, the challenge is to demonstrate the difference that we can make, the success we can create, are creating. Most environmentalists become very jaded at one time or another, as a result of understanding what the science tells us. Merely creating more environmentalists, then, is unlikely to solve our problems. As a scientist and environmentalist I am increasingly convinced that our main environmental enemy is poverty, together with lack of conviction that humanity can come together to solve our ills and move*

forward. However, if we look for evidence, we might find that in fact, we are moving forward, there is progress.

- "An emotional argument initially. And if they are interested, link to a scientific or intellectual one.
- Appeal to morals and emotions of people and then their brains.
- Both. I would love to see some of the information presented in a fashion that would be appropriate for younger viewers/readers.
- Hit it on all fronts. Facts, charts, pictures, video, witness testimonial, stories of failed cases, success stories, and lots of info on how people can get involved, be it on a small scale or a grand one.
- I would say an emotional issue that needs to back with an intellectual argument.
- Great visuals backed up with facts to get both across. Plus I think you need relevant actions.
- Both are necessary for total impact.

- **Fourteen percent (14%) of the visitors indicated that they would be more likely prompted by intellectual appeal than an emotional one.** The range of responses on this theme included:

- I would say it's an intellectual argument or suggestion I would be looking for. Since the problems are obviously huge, I appreciate knowing what small part as an individual I can do to help.
- For me it is an intellectual argument. I think for many people it is emotional.
- Intelligent presentation of information would appeal to me. 99.99% of people have no clue how to present or create information; therefore you need to read the information design books (*Envisioning Information*) by Edward Tufte so you know what needs to be done. Consulting a Hollywood movie director is not the way to go.
- Real stress on being factual (repeated in graphic design elements).
- Not battered animals, too harsh for children. More about toxins impacting humans would be educational.
- The information I find most helpful is accurate but not depressing. I thought that *Strange Days* did a good job of #1 informing the viewer of a problem they might not have known about #2 Showing the consequence of such a problem #3 Showing what is being done to combat a problem and give specific ideas of what individuals can do. I enjoyed following actual scientists into the field to see how they are researching and fighting problems.

- **Twelve percent (12%) of the visitors indicated that they would be more likely prompted by an emotional appeal over an intellectual one.** The range of responses on this theme included:

- Emotional. Like something like ""could this happen to your kids?"
- Emotions. Highlight the negative consequences of certain actions, and the positive consequences (save \$\$\$) of others.
- More emotions. Show what happens to families, communities AND economies in bad environments.
- I am an educator. Most of my students have little critical awareness. Of how many of your viewers is this true? The presentation would need to be geared to an audience's needs, wouldn't it? Frothy emotional appeals work, even if they aren't always accurate.
- It got pretty emotional when seeing what could happen to an individual. That works.

Conclusions

This report focused on an adult audience's experience with the *Strange Days on Planet Earth* project website: http://www.pbs.org/strangedays/index_flash.html. The goal of the evaluation was to gather feedback from website visitors who self-selected to visit the website and leave contact information on the site's feedback page. The evaluation was designed to examine visitors' perceptions of the website's overall appeal and clarity as well as their: use of the site, awareness and understanding of the environmental issues presented at the site, and efforts to engage or act on these issues.

A total of 50 website visitors completed the online questionnaire, representing a response rate of approximately 51% of the evaluation's eligible respondents. As the evaluation aimed for a 50% response rate, this rate was on target with the evaluation expectation. The respondent group included: a high percentage of females (62%), individuals of varying ages (17-66) with a mean age of 43, 14% minorities, and a majority of employed individuals (60%). Two-fifths of the group (44%) resided in the western states of the U.S., while one-third (36%) resided in central states, and one-fifth (20%) resided in eastern states. The group included a combination of regular and sometime viewers of PBS programs and science/nature programs, with two-thirds or more of the group reporting they watched these programs on a daily or weekly basis. Four-fifths (80%) of the visitors had viewed at least one of the four episodes from *Strange Days on Planet Earth*. *Invaders* was the most frequently watched episode (80%), followed by *The One Degree Factor* (76%), *Predators* (72%), and *Troubled Waters* (60%).

This final section of this report summarizes the strengths and weaknesses of the *Strange Days on Planet Earth* website as supported by the reactions of the adults who provided feedback on the website. Implications for Season 2 *Strange Days Ocean* are also provided where appropriate. In some cases suggestions for refining the website's approach are provided, although each suggestion is given in the spirit of assisting the project team's own brainstorming for revisions, and with the understanding that the ideas presented are not the only way to respond to visitors' feedback.

Part 1

How, when, and for how long visitors visited the *Strange Days on Planet Earth* website

- ➔ **Visitors' main sources for learning about the website were the *Strange Days on Planet Earth* television series, PBS television promotions, the PBS website, or a friend, family member, or colleague.** Specifically, nearly two-thirds (58%) of visitors found out about the website from the *Strange Days on Planet Earth* television series. A PBS television promotion was the next most frequently mentioned source, cited by one-quarter (24%) of the visitors. Nearly one-fifth each (18%) reported learning about the website from the PBS website or from a friend, family member, or colleague. Just under one-tenth (8%) said they found out about the website through a *Strange Days on Planet Earth* email announcement (epostcard). Smaller percentages of visitors found out about the website through: National Public Radio

(4%), television news or other promotion (4%), a local newspaper (4%), a science/ environmental magazine (2%), or when surfing the web for a local PBS station (2%). None of the visitors reported finding out about the website through the following sources: a national circulation newspaper, a PBS print publication (program guide, newspaper), or through other websites or radio programs not listed above. A small percentage of visitors (4%) couldn't remember how they found out about the website.

Implications for Season 2: In planning the promotional strategy for the Strange Days Ocean website, it seems worth reviewing whether the above findings reflect the promotional goals established for Season 1. Consider for example the fact that visitors most often found out about the website through the television series or a PBS television promotion. Given the high profile and visibility of these two broadcast sources, this set of findings doesn't seem surprising. Consider, however, the finding that nearly one-fifth of the visitors found out about the website through a friend, family member, or colleague. The percentage of visitors reporting this source was equivalent to the percentage of visitors citing the PBS website. The positive word-of-mouth promotion that the series apparently generated might be worth incorporating into the Season 2 promotional plan.

- ➔ **The website did not receive substantially more traffic from the visitor group as a whole during any particular month between April and November 2005.** The highest percentage of visitors said they visited the website during August-September 2005 (30%), followed by May-April 2005 (28%), June-July (26%), and then October-November 2005 (24%). Eight percent (8%) of the visitors indicated they visited the website during two separate months.

Implications for Season 2: The fact that the evaluation did not find a larger spike in web traffic during the months immediately surrounding the series premier, April 2005, was somewhat surprising. In interpreting these findings, however, note that an evaluation of visitors who choose to leave feedback or contact information on the website is not a direct measure of web traffic to the site as a whole. The project team can refer to its web statistics for a better indication of actual traffic to the site before, during, and after the series' premiere. Also note that while the series premiered in April 2005, the series aired again in many markets across the country between April and the end of the evaluation period. Visitors to the website between May-November may have viewed a repeated showing of the series.

- ➔ **The average amount of time visitors spent on the website was 35 minutes.** The minimum amount of time reported at the site was 1 minute while the maximum amount of time was 200 minutes.

Implications for Season 2: By way of comparison, consider these findings in the context of the evaluation design planned for Study 1 where 48 viewers were randomly assigned to watch all four episodes from the series and visit the website for 30 minutes after each set of episodes. The project team agreed upon the 30 minute time frame for the Study 1 "series + website" condition as a reasonable expectation of the amount of time visitors would ideally, (yet also realistically), spend at the website. It is encouraging that the Study 3 respondents, who visited the website on their own accord, seemed to average a little more time on site than the project team estimated. While these were motivated visitors who were willing to

leave feedback and contact information at the website, they did so independently and were not recruited or provided any incentives for doing so.

Part 2

Visitors' assessment of the appeal, learning value, and motivational impact of the website

- ➔ **The visitor group as a whole was very positive about the overall appeal of the *Strange Days on Planet Earth* website.** Using scales of 1 to 7, visitors indicated they liked the website (mean rating, 6.3), and that they felt the site offered interesting content (mean, 6.3) and was visually exciting (mean rating, 6.2).
- ➔ **Visitors were also positive about the overall clarity and user friendliness of the website.** Using scales of 1 -7, visitors generally agreed that the website offered a clear presentation (mean 6.2), that it was easy to navigate (mean rating, 6.1) and that it was easy to locate information that interested them (6.0).

Implications for Season 2: By way of comparison, note that these positive clarity and user friendliness ratings generally corroborate the website findings from Study 1. Of the 48 viewers in Study 1 who were randomly assigned to watch all four episodes from the series and visit the website for 30 minutes after each set of episodes, three-quarters (78%) found the website to be well designed, easy to navigate, and useful.

- ➔ **Visitors gave somewhat mixed ratings when asked to assess the website's density of information and science.** While visitors as a whole felt the amount of information presented at the website was slightly on the heavy side (mean rating, 5.2) they felt that the amount of science offered at the site, was about right (mean rating, 4.3).

Implications for Season 2: Although Study 1 did not directly assess the website for information and science density, when viewers were asked to describe what they found least valuable about the website, one-quarter (23%) said they felt the information at the website was redundant or too much like the information they received from the series. One-tenth of the viewers, meanwhile, felt the website had too much text and reading, and not enough interactivity (10%).

These Study1 findings may help explain the higher information density ratings found in Study 3. Rather than reduce the amount of information planned for the Season 2 website, the project team might reconsider the kinds of information it features on the site and where and how it features each type of information. For example, visitors may prefer to see episode-specific information featured less prominently on the website and more in-depth information and interactive features featured more prominently.

The above shift in emphasis also seem reasonable from the standpoint that the majority of Study 3 visitors said they found out about the website through the television series. These visitors have likely already tuned into the information presented within the episodes and are

most likely looking for the series to extend and reinforce the series' content rather than duplicate it.

Finally, note that Study 3 also found that a little over one-third (34%) of the visitors pointed to the website's depth and amount of environmental information as the aspect of the site that most stood out or left a lasting impression on them. The fact that even one-third of the visitors came up with this feature on their own accord, given the open ended nature of question, indicates that the site's informative nature was likely also appreciated by other visitors as well. Compared to other aspects of the sites that visitors praised, this feature was still the most frequently mentioned aspect of the site. Here again, based on such visitor feedback, it may be worth rethinking the kinds of information provided at the website and how that information is presented and positioned, rather than simply cut back on the overall amount of information at the site.

As for what the Season 2 priorities might include, note that Study 3 further showed that visitors would appreciate seeing more of the following, from highest to lowest frequency: information/follow-up materials on specific environmental topics, contact information to outside officials/expert, a more appropriate presentation style for younger viewers, additional incentive/motivation to fix environmental problems, sound/dialog, more or improved interactive features, and additional links to educational or conservation organizations.

- **The visitor group gave the website high marks for learning value and motivational impact.** Visitors generally agreed that they learned a considerable amount from the website (mean rating, 5.9) and that the website increased their understanding of the threats facing the environment in particular (mean rating, 6.1). Visitors also agreed, although a little less enthusiastically as a whole, that the website both increased their understanding of what they personally could do to help the quality of the environment (mean rating, 5.7) and encouraged them to take action to improve the quality of the environment (mean rating, 5.8). Finally, visitors indicated that the website left them feeling somewhat more hopeful than hopeless about the environment (mean rating, 4.8).

Implications for Season 2: By way of comparison, similar ratings were found in Study 1 when viewers who visited the project website were asked to rate how much they felt the combined experience of viewing the series and visiting the website increased their understanding of the threats facing the environment. The mean rating for the series + website group was 6.4, where the mean rating for visitors in the Study 3 evaluation was also a high 6.1 (both studies used the same 1-7 scale). The slightly lower rating in Study 3 may reflect the fact that these visitors were only rating the website and not the added value of viewing the series.

Participants in both studies were a little less certain about whether the website (Study 3) or the combined series + website (Study 1) experience had increased their understanding of what they personally can do to help improve the quality of the environment, however, as evidenced by the equivalent mean ratings of 5.7 in each case.

Looking ahead to Season 2, the project team might consider increasing the amount of attention the website gives to actions that viewers can take to address the series'

environmental issues. In the process, recall that Knight-Williams' 2003 front-end literature review found that communication programs that expect people to take action in response to an environmental problem need to draw clear connections between the environmental problem and how an individual's actions will make a difference in resolving the problem. The polling findings suggested that, in general, the best actions are likely those that people can:

- *Do at home -- the majority of the public reports that they frequently turn off lights and electrical appliances when not in use, lower the thermostat in the winter to conserve energy, recycle newspapers, cans, and glass, and reduce the use of air conditioning in the summer to conserve energy;*
- *Do without requiring a significant lifestyle change; and/or*
- *Save money by doing it.*

The polling findings also indicated that communication programs designed to inspire public action should take into account the following:

- *People are less likely to volunteer their time, donate money toward a cause, participate in educational activities, or write letters.²*
- *Actions involving consumer behavior are somewhat issue dependent, although the polling data seems to indicate that people prefer to pay more for resources (like electricity or gas), than be asked to reduce their consumption of these same resources.*

2.5 How visitors felt after using the website

➤ **Visitors indicated that after using the website they experienced more than one emotion or mixed-emotions.** Most often visitors said they felt motivated (56%), inspired (42%) or encouraged (40%). Other descriptors selected somewhat less frequently by visitors included, from highest to lowest frequency: hopeful (32%), scared (32%), depressed (30%), pessimistic (22%) optimistic (18%), defeated (6%) and confused (2%). Sixteen percent of the visitors (16%) wrote down a different descriptor from the above list of 10 options. Their additions included: “a mixture of the above,” “more informed,” “fatalistic,” “sad,” “annoyed,” “irritated,” “aggravated,” and “wanting more.”

Implications for Season 2: By comparison, note that viewers in Study 1 reported feeling the same kinds of emotions after using the website. Many more viewers said they felt encouraged, hopeful, motivated, inspired, scared, and optimistic after using the site than said they felt depressed, pessimistic, confused, or defeated. From highest to lowest frequency viewers said they felt: encouraged (60%), hopeful (58%), motivated (54%), inspired (42%), scared (35%), optimistic (33%), depressed (17%), pessimistic (15%), confused (6%), and defeated (2%).

² Note some subgroup differences exist however that may be important to the series. For example, parents of younger children are more likely to participate in educational activities than are non-parents.

Judging by visitors' emotional reactions to the website in both studies, the website has generally achieved the emotional tension the project team set out to communicate. The website can likely continue with the same overall affective tone in presenting the new material planned for Season 2.

- **Visitors were generally able to articulate at least one aspect of the website that stood out or left a lasting impression on them and all but one visitor described these aspects in positive rather than negative terms.** A little over one-third (34%) of the visitors mentioned that the website's depth and amount of information about environmental issues most stood out for them. While some viewers made this point in general terms, others discussed specific issues they enjoyed learning more about, particularly invasive species or global warming. Not quite one-third (30%) were most impressed by the website's focus on activism and actions that can be taken to address the environmental issues featured in the series. A little over one-fourth (26%) of the visitors meanwhile were impressed by the site's easy to use and/or understandable presentation or layout. Smaller percentages of viewers pointed to the following additional features: the interactive features and activities (12%), something about Edward Norton's appearance (6%), the magnifying glass (with one visitor finding this a valuable aspect of site while the other finding it lacking in value), or some other feature of the site (6%). Finally, one-tenth of the visitors (10%) stated that they couldn't remember what stood out most about the website or said that nothing left a lasting impression.

Implications for Season 2: By way of comparison, note that viewers in Study 1 also found various aspects of the website valuable, although here again, the amount of information provided at the site was the most frequently mentioned aspect (29%). Just under one-fifth (17%) said that they liked the web links directing them to different parts of the website. Fifteen percent (15%) found the easy navigation to be the most valuable part of the website. Thirteen percent (13%) found the "What can I do" section to be the most valuable part of the website, while 8% liked the overall layout of the website. Finally, 4-6% of viewers said they liked the "Why should I care" section of the website and the Interactive House feature.

- **The majority of the visitors felt the website seemed complete and wasn't missing any particular element.** Two-thirds of the visitors felt the website seemed complete (66%), one-fifth (18%) felt something was missing, and 16% left the item blank. The two most frequently cited elements that visitors felt were missing from the site included more information/follow-up materials on specific environmental topics (14%) and contact information to outside officials/experts (10%). Other suggestions included: more details on invasive species (6%), a more appropriate presentation style for younger viewers (6%), additional incentive/motivation to fix environmental problems (4%), sound/dialog (4%), more or improved interactive features (4%), and additional links to educational or conservation organizations (4%).

Implications for Season 2: By way of comparison, consider similar findings from Study 1 where viewers who visited the project website were asked to describe what they found least valuable about the website. Although nearly one-third (31%) said they found the entire website valuable, one-quarter (23%) felt that some of the information at the site was too redundant and essentially mirrored the content provided in the series. Smaller percentages

of viewers complained of other aspects of the site, including: that it had too much text and reading and not enough interactivity (10%), that the sections on the host and producers weren't of interest (8%), that the site lacked external links (6%), or that the Interactive House feature was slow (4%).

Part 3

Activities, promises, and links visitors pursued while at the website

- ➔ **Visitors reported engaging in a variety of activities while at the website and most indicated they engaged in at least four different activities while at the site.** The four most frequently mentioned activities were done by more than half of the visitor group and included: read more in-depth information about an episode (66%), read “What do experts say?” (60%), read “What can I do?” (60%), and read “Why should I care?” (54%). Between one-fifth and two-fifths or less of the visitor group mentioned other activities, including, from highest to lowest frequency: read “How do I measure up?” (42%), read about the series host Edward Norton (34%), made a “Promise” (34%), and read about the producers (18%). Smaller percentages of visitors reported looking at the Educators Guide (14%), participating in the “Idea Exchange” (10%), or looking at the glossary (8%).

Implications for Season 2: For additional context, consider the following relevant findings from Study 1. During their visits to the website, Study 1 viewers also said they engaged in a variety of reading, research, and interactive activities. Most often, however, they too decided to read more about: the episodes, the “Why should I care” section, the “What the experts say” section, or the “What can I do” section. They were least likely to read about the series host, the glossary, or the producers. From highest to lowest frequency, viewers reported that they: read more in-depth information about the episodes (83%), read “Why should I care” (67%), read “What do experts say” (67%), read “What can I do” (56%), looked at the Educators Guide (38%), read “How do I measure up” (38%), Made a promise (33%), read about the series' host Edward Norton (25%), looked at the glossary (23%), read about the producers (22%), and pursued other activities (25%).

In both Studies 1 and 3, visitors to the website were most inclined to explore sections of the site that addressed why they should care about the environmental problems featured in the series or what they could do about the issues. And yet, relatively few viewers in Study 1, one-third, made a promise at the site, while nearly two-thirds of the visitors in Study 3 reported making a promise. See the following bullet for additional discussion on this point.

- ➔ **The majority of visitors said they made a promise” at the website and most made more than one promise.** Sixty percent (60%) of the visitors made a “promise” while at the website. The three most frequently cited promises were all cited by one-fifth of more of the visitors, and included: buy Energy Star appliances (26%), don't release unwanted pets into the wild (24%), and use non-toxic alternatives to household chemicals (20%). Other promises made by between one-tenth and one-sixth of the visitor group included: use only

native plants (16%), clean boat after use (12%), and eat only sustainable seafood (10%). Very few visitors promised to buy certified forest products (6%) and only a couple of visitors couldn't remember the promise(s) they made (4%).

Implications for Season 2: In contrast to the above finding, consider that one-third of the viewers (33%) in Study 1 who visited the website said they made a promise. The fact that a substantially higher percentage of visitors in Study 3 reported making a promise may reflect a difference in their motivational level in visiting the website. While viewers in Study 1 were recruited to visit the website as an added value to watching the series (which already required a considerable investment of time), Study 3 website visitors comprised a fairly motivated group of visitors who self-selected to visit the site, as evidenced by their willingness to leave feedback and contact information at the website.

To help attract somewhat less motivated visitors to make a promise, additional attention might be given to bridging the website's information on actions and the opportunities it provides for viewers to act. For additional discussion on this point, note viewers' reasons for finding the promise activity valuable or not valuable (see next bullet) and the earlier discussion from Knight-Williams' 2003 literature review about the kinds of environmental actions the public is most likely to pursue.

With respect to the kinds of promises viewers made while at the site, however, similar patterns were found in Studies 1 and 3. The following promises were reported from highest to lowest frequency in Study 1: use non-toxic alternatives to household chemicals (31%), don't release unwanted pets into the wild (29%), buy Energy Star appliances (25%), use only native plants in your garden (23%), eat only sustainable food (21%), buy certified forest products (10%), and clean your boat after use (4%).

- ➔ **Visitors as a whole felt the “promise” was a moderately valuable exercise (mean rating, 5.7).** Visitors who made a promise tended to rate the exercise higher than those who didn't make a promise.

Implications for Season 2: By contrast, when viewers from Study 1 who visited the website were asked to rate the value of the promise as an exercise, the mean rating for the group was more than one point lower (4.3 in Study 1 vs. 5.7 in Study 3). This discrepancy may in part be explained by the fact that a higher percentage of Study 3 visitors made a promise than didn't, and those who made a promise tended to rate the exercise higher. Additionally, as noted previously, the Study 3 respondents also comprise a self-selected and motivated visitor group, a point discussed earlier in the Conclusions.

Finally, note that viewers in Study 1 who gave the promise exercise a lower rating explained that they: didn't notice the “promise” section of the website, felt the promise didn't mean much, or felt it gave viewers a false sense of hope. Those who gave the promise a positive rating however liked the fact that the promise was motivational and felt that they were more likely to do the action now that they had promised to do so. Others liked that the promise would serve as a reminder later for them to actually do what they had promised or liked that the promise was a concrete and real way to commit to an action.

If the project team's goal is to see a higher proportion of website visitors make promises, or conduct similar activities at the project website during Season 2, then it might be useful to look at the reasons why some viewers in Study 1 said they chose to not make a promise. Here the main issues seemed to involve the promise: not having a prominent enough position on the site, not being perceived as personally meaningful, or being perceived as offering a false sense of hope.

- ➔ **A minority of viewers clicked on a link provided at the website.** Not quite one-fifth (18%) of the visitors said they used the *Strange Days on Planet Earth* website to link to another website or activity related to the series. The sites that visitors specifically mentioned included: http://www.wws.princeton.edu/ota/disk1/1993/9325_n.html, http://www.ucsus.org/invasive_species/call-to-action-on-invasive-species.html, <http://www.seafoodchoices.com/>, The sponsors, i.e. Ford, Packard, Vulcan, The zoo in the Puget Sound in Washington, More sites on invasive species, PBS home website to find out about other programming, and In a forum that I participate in.

Implications for Season 2: By contrast, note that two-fifths (39%) of the viewers in Study 1 who visited the website said they linked to some other site, compared to one-fifth (18%) of the visitors in Study 3. The Study 1 viewers reported linking to a wide range of different national and local organizations that provided more in-depth information and interactive activities related to content provided in the series.

As for why a higher percentage of visitors in Study 1 reported linking to other websites, one possibility is that where viewers in Study 1 viewed all four episodes from the series, website visitors in Study 3 did not generally view more than one or two episodes from the series. Viewers in Study 1 may have been more eager to branch outside the confines of the website to explore information and resources that went beyond the series' information since they were already familiar with that material.

If the project team's goal is to see a higher proportion of website visitors use such external links, then it will be important to look at: a) the kinds of links that are provided to ensure they address information that will interest viewers (e.g., resources that focus on solutions or actions and information that extends and doesn't just duplicate series); and b) the positioning of the links to ensure they are featured prominently on the site so visitors are aware of them.

Part 4

Actions visitors took as a result of using the website and their suggestions for enhancing the website in this regard

- ➔ **Most visitors reported taking some action as a result of using the website and these actions most frequently involved those they could do at home or through their regular shopping purchases or save money by doing.** More than four-fifths of the visitors (84%) said they took some action as a result of their experience at the website. The four most frequently cited actions included: purchased or used non-toxic alternative to household

chemicals (44%), returned to the *Strange Days on Planet Earth* website to find additional information about the topic (38%), replaced regular incandescent bulbs with energy-efficient bulbs (36%), and purchased energy efficient appliances (22%). Nearly one-fifth of the group each (18%) said they stopped dumping pollutants into their drains or sewers (18%) or chose/ate sustainable seafood (ate “lower on the food chain”). Sixteen percent each (16%) said they joined or donated money to an environmental/ conservation organization, checked the quality of water coming out of their faucets, or chose a car wisely for fuel efficiency/low emissions. Fourteen percent (14%) said they planted only local native plants, shrubs, and tree species in their garden. Less than one-tenth reported engaging in the following actions: checked/monitored the water quality in their local community (8%), found out about organizations that compensate farmers and ranchers for damage done by large predators (6%), found alternative arrangements for an unwanted pet rather than releasing it into the wild (4%), bought certified forest products (2%), and rinsed boats and other watercrafts after use to reduce invasive species (2%). Finally, 16% of the visitors said they did an action that wasn’t provided in the checklist, including: talking to others/spreading the word, buying more organic or locally produced products, starting a school club, reading more about the issues, encouraging others to visit the website and watch the series, and volunteering for environmental improvement projects,

Among the 16% of visitors who said they didn’t take an action, their reasons included that they were already doing the actions, that they hadn’t had a chance to do them, or that the available actions weren’t applicable to their lives.

Implications for Season 2: The above findings bode well for Season 2. In devising the kinds of actions that will be promoted on the Season 2 version of the website, however, note the recommendations following the final bullet point below as well as the earlier recommendations about the actions being, to the extent possible: doable at home, doable without requiring a significant lifestyle change; and/or likely to save viewers money.

4.3 Visitors’ preferences for intellectual vs. emotional appeals to motivate them to action

- **Visitors indicated that appealing to both their emotions and intellect would likely motivate them to take actions related to the series rather than appealing to just their intellect or emotions.** Specifically, two-thirds (66%) of the visitors expected they were more likely be prompted to action by an approach that combined intellectual and emotional appeals. Several of these visitors specified that the appeal should begin with an emotional argument that then connects to or is backed-up by an intellectual argument (or set of facts). Fourteen percent (14%) of the visitors indicated that they would be more likely prompted by intellectual appeal than an emotional one. Twelve percent (12%) of the visitors indicated that they would be more likely prompted by an emotional appeal over an intellectual one.

Implications for Season 2: The website findings from Study 1 and Study 3 discussed in the Conclusions to this point collectively suggest that for the Season 2 website, the project team might:

- *Prioritize information that expands on rather than reiterates the series’ content;*

- *Maintain the same affective tone that seems adequately balanced between the two extremes of hopeful and depressing;*
- *Increase opportunities for interactivity;*
- *Emphasize realistic and do-able solutions and actions to an even greater extent;*
- *Provide contact information to outside officials/experts where feasible;*
- *Feature a more appropriate presentation style for younger viewers;*
- *Add sound/dialog to aspects of the website; and*
- *Feature additional links to educational or conservation organizations.*

The visitor feedback provided from this final exploratory question adds an additional element the project team might want to consider in devising action-oriented appeals for Season 2. Here visitors suggested the project team develop appeals that integrate both intellectual and emotional arguments. Their considered suggestions about how such an approach might work are quoted earlier in the report. As at least some visitors felt the website didn't provide sufficient incentives and motivation to mobilize visitors to pursue environmental actions, the project team may find these suggestions useful for brainstorming potential new directions for Season 2.