



**Summative Evaluation of
National Geographic's
*Strange Days on Planet Earth***

Study 5

**Evaluation of screening events
held at four consortium sites**

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, will 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 a summative evaluation of the *Strange Days on Planet Earth* series and outreach program. The evaluation generally focused on the extent to which the project accomplished the informal science education goals described in grant materials submitted to the NSF prior to funding.

A total of five separate studies were conducted for the project's independent summative evaluation. This report presents evaluation findings from Study 5, and involves screening events held at four consortium member sites during April 2005, the premier month for the *Strange Days on Planet Earth* television series on PBS. The purpose of the evaluation was to solicit participants' feedback about the screening events as well as their expectations for the series and personal involvement in actions related to the series.

The four consortium sites and the screening activities conducted in each case included:

- **The Aquarium of the Pacific (AOP)** previewed the *Troubled Waters* episode during their Earth Day Weekend Celebration (April 23/24) in cooperation with KCET. The event reached KCET members and Aquarium Earth Day weekend attendees. KCET members were invited to attend Aquarium of the Pacific at a reduced price. KCET members were invited to a screening of *Troubled Waters* on Saturday, April 23 with Q&A with series producer David Elisco and Aquarium staff.
- **North Carolina Museum of Natural Sciences (NCMNS)** premiered *The One Degree Factor* on April 19, in the WRAL Digital Theater in partnership with UNC-TV. The event included a "meet and greet" screening of *Strange Days* feature, and a presentation by Greg Fishel, NC's best-known meteorologist.
- **Shedd Aquarium (SHEDD)** previewed *Invaders* during April 19/20. The sessions included Q&A and discussion. At one session an invasives expert from University of Notre Dame facilitated the discussion. Attendees included volunteers, staff, Chicago Wilderness members and community partners.
- **Arizona Sonora Desert Museum (ASDM)** previewed the series during their Earth Week events April 16 and 17th multiple times a day.

Method

Staff from the four consortium sites participating in the evaluation agreed to distribute questionnaires at the end of their respective screening events. The number of participants attending each screening event was not confirmed, although the low number of questionnaires returned at three of the four sites ($n < 10$ per site) indicates that the response rate at these sites was low in relation to the number of attendees. The project team explained that this discrepancy was primarily a function of time constraints, which precluded more participants from completing the questionnaire at the conclusion of the screening events.

Instrument

The post-screening questionnaire consisted of two pages of closed-ended and open-ended questions and took approximately 5-8 minutes to complete. The questionnaire asked participants: to identify how they found out about the screening event, to explain why they attended the event, to describe what they felt was the most valuable part of the event, to rate their expectations of the series, to rate the effectiveness of the series' host Edward Norton, and to estimate whether they expected to take any actions as a result of the screening event. At the end of the questionnaire participants were asked for basic demographic and background information to help the project team learn about the audience attending the screening events.

Analysis

Given the small scale nature of the evaluation, 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.

Participant demographic and background information

A total of 36 participants completed questionnaires across the four consortium sites, including: 17 participants from the AOP, 9 from the NCMNS, and 5 each from ASDM and SHEDD. Within the sample of 36, the evaluation found:

- The questionnaire respondents were predominately White/Caucasian (80%).
- Participants' ranged in age from 35 to 55. The average age of participants at both the NCMNS and ASDM screenings was 48, for the SHEDD 34, and for the AOP screening 41.
- Overall, there was a balance in the number of males and females participating in the evaluation although there were more females than males attending the NCMNS, ASDM, and SHEDD events and more males than females attending the AOP event.
- Most of the respondents were employed (72%), with very few students, retirees, or homemakers represented in the group.
- Almost half of the respondents (47%) said they needed an understanding of science for their work.
- Most respondents had completed college or at least some graduate school (75%).
- Finally, there was a combination of weekly, monthly, and less than monthly viewers of science/nature programs among the respondents.

Respondents' demographic and background information for each site is summarized in Table 1, below. Given the small number of respondents, percentages results are not provided for each site.

Table 1					
Participant demographic background information					
Demographic/background factors:	TOTAL (N=36)	AOP (N=17)	NCMNS (N=9)	SHEDD (N=5)	ASDM (N=5)
Gender:					
Female	17	5	5	4	3
Male	18	12	3	1	2
Left blank	1	-	1	-	-
Occupational status:					
Retired	3	1	1	-	1
Homemaker	2	2	-	-	-
Student	3	2	-	-	1
Unemployed	-	-	-	-	-
Employed	26	12	7	5	2
Left blank	2	-	1	-	1
Need science understanding for work:					
Yes	17	6	7	3	1
No	8	5	-	2	1
Left blank	11	6	1	-	3
Educational status:					
Less than high school	3	3	-	-	-
High school or equivalent	-	-	-	-	-
Some college, but no degree	3	2	-	-	1
College graduate	12	7	3	2	-
Some graduate school	4	-	1	2	1
Completed graduate school	11	5	4	1	1
Left blank	3	-	1	-	2
Frequency of watching science/nature programs:					
Daily	1	-	-	1	-
Weekly	11	8	2	1	-
Monthly	14	5	3	3	3
Less than once a month	4	1	3	-	-
Never	2	2	-	-	-
Left blank	4	1	1	-	2
Spanish, Hispanic, Latino origin:					
Yes	2	2	-	-	-
No	30	14	8	5	3
Left blank	4	1	1	-	2
Racial background:					
African-American/Black	1	1	-	-	-
Asian	2	2	-	-	-
Native American /Alaskan Native	1	1	-	-	-
White/Caucasian	29	13	8	5	3
Left blank	3	-	1	-	2

Findings

Part 1. Factors that contributed to participants attending the screening events

1.1 How participants found out about the screening events

Screening participants were asked to identify how they learned about the screening event they attended, choosing from several options, including: Email from my local science center/aquarium/zoo/ botanical center; Newsletter from my local science center/aquarium/zoo/botanical center; Friend or family member; Newspaper; and Other. Respondents' sources for finding out about the event at each of the four sites are summarized in Table 2.

Table 2					
How participants found out about the screening events					
Source:	TOTAL (n = 36)	AOP (n=17)	NCMNS (n=9)	SHEDD (n=5)	ASDM (n=5)
Email from local science center/aquarium/zoo/botanical center	16	5	7	4	-
Local PBS station notice (email, flyer)	7	7	-	-	-
Friend or family member	5	4	1	-	-
Newsletter from my local science center/aquarium/zoo/ botanical center	1	-	-	-	1
Newspaper	1	-	-	-	1
Fliers posted at science center/aquarium, zoo/botanical center	4	1	-	-	3
Other	3	1	1	1	-

Overall, the largest percentage of participants, 44%, said they learned about the screening event through email notices sent from their local consortium site. One-fifth of the group (19%), all AOP participants, said they learned about the event through their local PBS station (KCET).¹ A slightly smaller group (14%), mostly AOP participants, learned about the event from a friend or family member. One-tenth (11%) of the participants, mostly

¹ Although different KCET channels were mentioned as three participants pointed to email notices sent by KCET, one mentioned seeing a booth, one saw a flier, and one heard about the event from a fellow KCET member.

ASDM participants, learned about the event through notices posted at their consortium site. Only one respondent from all four groups, an ASDM participant, learned about the event from a newspaper, while another ASDM participant was the only respondent to learn about the screening event from a consortium member newsletter. The remaining sources for learning about the screening events fell under the ‘Other’ category and were mentioned by only one participant each, including: *belong to docent program, co-sponsor, or visited science center.*

1.2 Why participants attended the screening events

Participants were asked to explain why they attended the screening event – or what drew them to it. **Nearly two-fifths (39%) of the participants said they attended because they wanted to learn more about the environmental problems featured in the series. Less than one-fifth (14%) said that they worked at the museum or knew a friend that worked there. One tenth (11%) of the respondents, all AOP participants, generally stated that they were curious or interested in the event without specifying their reason for attending further. A small number of participants (5% each) said they were drawn because: they had heard positive things about the series, the event was an Earth Day event, the event offered a chance to visit their local science center, or because they wanted to hear the invited speaker.** Table 3, below, presents the reasons provided by participants at each consortium site.

Table 3					
What drew participants to the screening events					
	TOTAL (n = 36)	AOP (n=17)	NCMNS (n=9)	SHEDD (n=5)	ASDM (n=5)
Chance to learn about the environmental problems featured in the series	14	8	3	2	1
Worked at the museum/knew a friend that worked there	5	-	3	1	1
Generally curious/interested	4	4	-	-	-
Heard positive things about the series	4	-	1	3	-
Earth Day	2	2	-	-	-
Chance to visit science center	2	2	-	-	-
The speaker	2	-	2	-	-
Other	5	2	1	-	2
Left blank	-	-	-	-	1

The following section details the main reasons for attending the screening events provided by the questionnaire respondents at each of the four sites.

Reasons provided by AOP participants

Among the 17 respondents who provided feedback on the AOP screening:

- Eight (8) were eager to learn about the state of the environment and/or the environmental problems featured in the series, as in:
 - *Wanted to be aware of environmental problems.*
 - *Wanted to be aware of what's happening around our planet.*
 - *Silent Spring brought on a whole community awareness of the environment. We need to do it again. This sounded like that.*
 - *I am interested about nature and health and especially what is happening with our Planet Earth.*

- Four (4) said that a key reason for attending the *Strange Days on Planet Earth* event was that it simply sounded interesting or they were curious to learn what it was about:
 - *It sounded interesting.*
 - *Curious.*
 - *Interested.*
 - *Friend was interested.*

- Two (2) were drawn by the chance to visit their local aquarium:
 - *Aquarium visit*
 - *A chance to visit the long beach aquarium. I was unfamiliar with the program but curious given the e-mail.*

- Two (2) were drawn given that it was an Earth Day event:
 - *Earth Day event.*
 - *Earth day.*

- Two (2) felt drawn as a result of other reasons, including the PBS station booth about the event or the Question and Answer session that followed the screening:
 - *KCET Booth.*
 - *The topic and the Q & A session to follow.*

Reasons provided by NCMNS participants

Among the 9 respondents who provided feedback on the NCMNS screening:

- Three (3) were eager to learn more about the state of the environment and/or environmental problems featured in the series:
 - *My wife and I try to attend programs like this at the museum to learn more about the natural world in which we live.*
 - *I wanted to be more knowledgeable about global warming.*
 - *Interesting invasive species a real problem in everyone's backyard.*

- Three (3) were drawn in by the fact that they worked at the museum and wanted to attend or knew a friend that worked at the museum who told them about it:
 - *Friends worked on it.*

- *I work at the museum and had been hearing about it for a while so I wanted to see what it was about.*
- *Friend of the museum.*
- Two (2) stated that the invited speaker was what drew them to the *Strange Days* event:
 - *The speaker after the movie.*
 - *...and wanted to hear the speaker.*
- Two (2) others mentioned some other reasons for attending the event, including enjoying National Geographic series and lecture series, and/or being attracted to the event's marketing:
 - *The production that went into the marketing was quite intriguing.*
 - *Enjoy all national Graphic series and have also enjoyed lecture series at the museum.*

Reasons provided by SHEDD participants

Among the 5 respondents who provided feedback on the SHEDD screening:

- Three (3) said they had heard positive things about the television series:
 - *...and heard good things about the series.*
 - *Quality program with strong science. Looked credible and entertaining-graphics/Ed Norton.*
 - *I love the programming - adventurous and mysterious.*
- Two (2) were interested in learning more about the environmental problems featured in the series:
 - *I wanted to learn more about the problem we have created and how to "fix" them.*
 - *Interested in the subject*
- One (1) worked for the museum and wanted to attend as preparation for an upcoming conference: *I am attending the Strange Days conference in May. I want to learn as much as I can before going to this conference.*

Reasons provided by ASDM participants

Among the 5 respondents who provided feedback on the ASDM screening:

- One (1) attended the event accidentally but then was attracted to the episode that was being shown: *We happened in accidentally but found the production fascinating-Amazing photography*
- One (1) was encouraged to attend by a docent and then was attracted to the discussion that ensued upon attending the event: *Interesting discussion at beginning made me want to stay. Also a docent at the front mentioned it.*
- One participants (1) indicated working for the museum: *As a Docent I wanted to attend.*

- One participant (1) was interested in learning more about the environmental problems featured in the series: *Interest in earth's ecology*.

Part 2: Participants' reactions to the screening events

2.1 What participants felt were the most valuable aspects of the screening events

Screening participants were asked to describe the most valuable part of the screening event for them personally. Table 4 presents the main reasons respondents described at each consortium site.

Table 4					
What participants felt were the most valuable aspects of the screening events					
Most valuable part:	TOTAL (n = 36)	AOP (n=17)	NCMNS (n=9)	SHEDD (n=5)	ASDM (n=5)
Learning about threats to the environment (water toxins, invasive species, pollution, global warming)	11	5	3	1	2
Learning ways to clean and preserve the planet	4	3	-	1	-
Learning that research is being done to address the problems	3	2	1	-	-
Learning about the fragility/connectedness of ecosystems	3	-	2	-	1
Listening to the speaker	2	-	2	-	-
Seeing new educational material	2	-	-	2	-
Felt inspired to volunteer	1	-	-	-	1
Other	7	5	2	-	-
Left blank	3	2	-	1	1

Looking across the four consortium sites, no one aspect of the screening event stood out as most valuable feature for the majority of participants. The largest percentage, nearly one-third of the participants (31%), felt that the most valuable part was learning about threats to the environment -- including water toxins, invasive species, pollution, or global warming -- depending on the episode(s) viewed. One-tenth of the participants (11%) appreciated the opportunity to learn about ways to clean and preserve the planet. Less than one-tenth (8%) liked learning that environmental research is being done to address the environmental problems addressed in the series, while another 8% was interested in information learned about the fragility/connectedness of ecosystems. A small number of participants (2% each)

liked listening to the speaker or being exposed to new educational materials. Finally, one participant liked that the event inspired her to volunteer in some way.

The following section reviews the findings for each individual consortium site.

Most valuable part of the event for AOP participants

Among the 17 respondents who provided feedback on the AOP screening, 15 responded as follows:

- Five (5) felt the most valuable part of the event was learning about the hazardous toxin chemicals that are endangering the environment, the species within it, and even the lives of humans, as in:
 - *I learned a lot about how toxic chemicals are affecting species and the implications of their continued impact on the environment.*
 - *Knowing how toxins affect personal life. I drink tap water. I experienced a miscarriage.*
 - *To be aware of what we can do about our daily life because I am concerned about what I eat, drink, smell etc.*
- Three (3) felt the most valuable part was being educated in ways to clean and preserve the planet, as in:
 - *Educational to save our planet.*
 - *To learn what plant clean water environment*
- Two (2) thought the most valuable part of the event was learning that research is being done to address the problems featured in the series.
 - *That research is being done!!!*
 - *The reason of the people's research.*
- Five (5) wrote some other response that did not fit into a particular category:
 - *Connecting all water systems and ecosystems.*
 - *Q & A was able to fit other under deals opinions of things.*
 - *The optimism expressed by the researchers resented in the program.*
 - *All especially frogs.*
 - *Bringing in specifics so the conclusions can not be dismissed.*

Most valuable part of the event for NCMNS members

Among the 9 respondents who provided feedback on the NCMNS screening:

- Three (3) felt the most valuable part of the event was learning about global warming:
 - *Explaining more about global warming.*
 - *Listening to the speaker and how he came to his conclusions about Global Warming.*
 - *That I learned more about Global Warming than I ever had before and how impacting it is.*
- Two (2) felt the most valuable part was learning about ecosystem fragility and/or connectedness, as in:
 - *It appears that our ecosystem is extremely delicate.*

- *Learning more specific connections between different areas of the world.*
- Two (2) more believed the most valuable part of the event was listening to the speaker effectively deliver information:
 - *Hearing he speaker after the movie, he was engaging and interesting.*
 - *Listening to the speaker and how he came to his conclusions about Global Warming.*
- Two (2) others put down some other response that did not fit into a particular category:
 - *Networking opportunity.*
 - *Realizing again-how hard it is to get minorities to become engaged in natural science topics. The audience was not a group of undecided/non-environmentalist.*

Most valuable part of the event for SHEDD participants

Among the 5 respondents who provided feedback on the SHEDD screening:

- Two (2) liked learning about the format of the videos in preparation for a conference, as in: *New educational material and The most valuable part was exposure to the format of the videos. This will help me prepare for what to expect at the conference*
- One (1) liked learning about ways that individuals can make a difference in addressing environmental problems, as in: *Examples of how one person's decision can make a difference. i.e. The former in Australia or plant grower in the U.S. Helps reaffirm that individual effects matter.*
- One participant (1) appreciated learning about how wildlife is being destroyed as a result of invasive species, as in: *The most valuable was also the scariest-that we are destroying our wildlife-man is the problem.*

Most valuable part of the event for ASDM participants

Among the 5 respondents who provided feedback on the ASDM screening:

- Two (2) liked learning about the problems of invasive species, as in:
 - *Didn't realize how much invasive species were a problem.*
 - *I feel to be more aware of what is happening in my surroundings.*
- One (1) liked learning about the interconnectedness of the ecosystems, as in: *How ecology of any part of earth is affected by other areas-e.g. Mai?*
- One (1) liked that he/she felt inspired to volunteer, as a result of attending: *Inspired to volunteer.*

2.2 Participants' assessment of Edward Norton's effectiveness as the host of the *Strange Days on Planet Earth* series

Participants were asked to rate the overall effectiveness of Edward Norton as the host for the *Strange Days on Planet Earth* television series using a scale of 1 (ineffective) to 7 (very effective). As shown in Table 5, participants generally agreed that Edward Norton was a moderately effective host. The highest mean ratings, overall, were provided by the ASDM and AOP participants at 6.4. The mean rating for SHEDD was an intermediate 5.4, with the NCMNS rating falling somewhat lower at 4.9. Caution should be taking in interpreting differences in these mean ratings, however. It is important to remember that the number of respondents in the four groups was uneven and that the mean rating for the AOP was based on a larger sample (n=17) than the other groups, each of which had less than 10 participants.

Table 5						
How effective participants felt Edward Norton was as the series' host (n=36)						
1	2	3	4	5	6	7
Ineffective						Very effective
			(NCMNS) 4.9			
					(ASDM) 6.4 (AOP) 6.4	
				(SHEDD) 5.4		

Part 3:
- Looking Ahead -
Participants' expectations of: the series,
taking actions related to the series, and using the website

3.1 Participants' expectations of the series

Based on what they had seen of the *Strange Days on Planet Earth* television series at the screening event, participants were asked to rate their expectations for five different aspects of the series as a whole. **Generally speaking, all four groups showed high expectations for the upcoming series. Most participants expected they would: like the series, find the content interesting, perceive the visuals to be exciting, learn a lot, and recommend the series to others.** Table 6, below, and the subsequent bullet points, present the mean ratings for each of the four sites.

Table 6						
Participants' expectations for the <i>Strange Days on Planet Earth</i> series (n=36)						
1	2	3	4	5	6	7
Will dislike					(ASDM) 6.6 (SHEDD) 6.6 (AOP) 6.0 (NCMNS) 5.9	Will like
Content will be boring					(ASDM) 6.6 (NCMNS) 5.9 (AOP) 5.7 (SHEDD) 5.6	Content will be interesting
Will be visually dull					(NCMNS) 6.1 (ASDM) 6.4 (AOP) 5.6 (SHEDD) 5.0	Will be visually exciting
Will learn nothing					(NCMNS) 5.9 (ASDM) 7.0 (AOP) 5.5 (SHEDD) 5.4	Will learn a lot
Will not recommend					(NCMNS) 6.1 (ASDM) 6.6 (AOP) 5.8 (SHEDD) 5.2	Will recommend

- For the item asking participants to rate how much they thought they would like or dislike the series using a scale of 1 (will dislike) to 7 (will like), the mean ratings ranged from a low of 5.9 at NCMNS to a high of 6.6 at both SHEDD and ASDM, with the AOP group giving an intermediate average rating of 6.0.
- For the item asking participants to rate how interesting they expected the content to be using a scale of 1 (will be boring) to 7 (will be interesting), the mean ratings ranged from a

low of 5.6 at SHEDD to 6.6 at the ASDM, with the AOP and NCMNS groups giving an intermediate average rating of 5.7 and 5.9 respectively.

- For the item asking participants to rate the visual excitement of the series using a scale of 1 (will be visually dull) to 7 (will be visually exciting), the mean ratings ranged from a low of 5.0 at the SHEDD to a high of 6.4 at the ASDM, with the AOP group giving an intermediate average rating of 5.9 and the NCMNS giving an average rating of 6.1
- For the item asking participants to rate how much they thought they would learn from the series using a scale of 1 (will learn nothing) to 7 (will learn a lot), the mean ratings ranged from a low of 5.4 at the SHEDD to a high of 7.0 at the ASDM, with the AOP group giving an intermediate average rating of 5.5 and the NCMNS an average rating of 5.9.
- Finally, for the item asking participants to rate how much they thought they would recommend the series using a scale of 1 (will not recommend) to 7 (will recommend), the mean ratings ranged from a low of 5.2 at the SHEDD to a high of 6.6 at the ASDM, with the AOP group giving an intermediate average score of 5.8, and the NCMNS giving an average rating of 6.1.

Note that while the above findings generally indicate higher mean ratings for the ASDM, lower mean ratings for SHEDD, and intermediate ratings for the NCMNS and the AOP, caution should be taken in interpreting these findings. It is important to remember that the number of respondents in the four groups was uneven and that the mean rating for the AOP was based on a larger sample (n=17) than the other groups, each of which had less than 10 participants.

Finally, to provide context to their ratings, at least some of the participants from each group chose to explain one or more of their ratings, as follows:

- Two (2) participants from the AOP group explained:
 - *Very explanatory information.*
 - *I am so glad someone is doing what I have been wondering and worrying about.*
- Four (4) participants from the NCMNS group explained:
 - *A little (very little) I started getting sleepy in the first one.*
 - *I guess I'm more excited about the other series.*
 - *It was very interesting and informative. I learned a lot.*
 - *On learning: I ranked a 5 because I am very familiar with the subject matter in the movie.*
- Three (3) participants from the SHEDD group explained:
 - *I believe it to be very captivating. I only wish I could have seen the whole series.*
 - *I feel like I could recommend this series to colleagues but not to the everyday person. I am not sure that it would sustain the interest of a non-science person.*
 - *They seem a little scary and don't have much info. On what ordinary people are doing or can do to help.*
- One (1) participant from the ASDM group explained:
 - *Very innovative mystery-format.*

3.2 Participants' expectations for watching the *Strange Days on Planet Earth* series

Participants at each screening event were asked to identify the episodes from the *Strange Days on Planet Earth* series they planned to watch. **Looking across the four consortium sites, most participants (84%) planned to watch more than one episode, with the exception of a few participants (14%) who said they did not plan to watch any of the episodes.² Two-thirds of the participants (66%) said they planned to watch *Troubled Waters* while 64% planned on watching *Invaders*. More than half (55%) of the participants planned to watch *Predators*, and half (50%) planned to watch *The One Degree Factor*.**

Table 7 Episodes from <i>Strange Days on Planet Earth</i> participants planned to watch					
Episodes of the <i>Strange Day Series</i> :	TOTAL (N=36)	AOP (N=17)	NCMNS (N=9)	SHEDD (N=5)	ASDM (N=5)
<i>Troubled Waters</i>	24	13	6	4	1
<i>Invaders</i>	23	10	7	4	2
<i>Predators</i>	20	9	6	4	1
<i>The One Degree Factor</i>	18	9	3	4	2
None	5	2	2	1	-

Participants who did not plan on watching any episodes from the series were asked to explain why. Accordingly, these four participants from the AOP and NCMNS explained their reasons as follows:

- Two (2) participants from the AOP noted they either missed the first two episodes (which had already aired before the screening event) or pointed to timing in general as an issue:
 - *I didn't know about the first 2 and missed them.*
 - *Timing.*
- Two (2) participants from the NCMNS noted the potential for competing programming or the lack of a television at home:
 - *Depends on what else is on at the time.*
 - *Don't have TV on house cable*

² Note that the “none” selection could include participants who had already seen the episodes in some other context.

3.3 The actions participants felt inspired to take after watching *Strange Days on Planet Earth*

Participants at each site were asked to describe what actions, if any, they felt inspired to take after watching the episode(s) screened from *Strange Days on Planet Earth*. **Although no one action stood out for the majority of respondents across the sites, the most frequently cited action was visiting the *Strange Days on Planet Earth* website, mentioned by 11% of the participants. A few other actions were each mentioned by 8% of the participants, including: researching the series' topics more in-depth through magazines, newspaper articles or websites, buying organic products, supporting research groups and legislation, joining an organization/engaging others, and generally helping/volunteering in some way. Note that a large percentage of respondents (22%), mostly AOP participants, left this item blank.**

Table 8					
What actions participants felt inspired to take after watching <i>Strange Days on Planet Earth</i>					
Expected actions:	TOTAL (N=36)	AOP (N=17)	NCMNS (N=9)	SHEDD (N=5)	ASDM (N=5)
Visit the <i>Strange Days on Planet Earth</i> website	4	3	-	1	-
Read magazines, newspaper articles, websites	3	-	2	-	1
Buy organic products	3	2	-	1	-
Support researching groups and legislation	3	2	-	1	-
None	3	-	2	1	-
Help/volunteer in some way	3	-	-	1	2
Join an organization/engage others	3	-	2	1	-
Other	3	4	1	-	2
Left blank	8	6	2	-	-

The following section details the proposed actions of participants at each of the four consortium sites.

Proposed actions among AOP participants

Among the 17 respondents who provided feedback on the AOP screening, 11 answered this question as follows:

- Three (3) stated that they were inspired to visit the *Strange Days on Planet Earth* website more often and learn even more than they did at the event:

- *Find more information in PBS, org. and take action in what I can do to protect my family.*
 - *I will visit KCET org and explore some of the links for Strange Days and definitely continue voting for environmental astute candidates.*
 - *Look more at the Strange Days website and to continue doing what I can on a personal basis.*
- Two (2) were inspired to consume more organic products:
 - *Eat more organic food and bottled water.*
 - *To buy and consume organic products.*
 - Two (2) were inspired to support research groups and legislation in favor of helping the environment:
 - *Learn more and support groups researching and lobbying to clean environment*
 - *Support and vote right pollution and donate money and time to various Science research program.*
 - Four (4) others offered responses that did not easily fit into the above categories:
 - *Communicate to family and friends pollution problems.*
 - *Help save water and animals.*
 - *Necessary for all life.*
 - *Remove lead.*

Proposed actions among NCMNS participants

Among the 9 respondents who provided feedback on the NCMNS screening, 7 answered this question as follows:

- Two (2) were inspired to look at magazines, newspaper articles, and/or websites concerning global warming for more information:
 - *Read the magazine and current newspaper articles.*
 - *To look more critically at websites proposing to having the facts on global warming.*
- Two (2) more were inspired to join an organization and engage others about these topics:
 - *How to engage those not interested in these important topics.*
 - *Well I already belong to the Sierra Club, and I participate with them in attempting to change industries government.*
- Two (2) others were not inspired to take an action:
 - *None.*
 - *none to be honest.*
- One (1) felt inspired to continue to recycle and drive cars that don't pollute the environment as much: *"It more reinforced the actions I am l already taking as the right ones- drive a hybrid, recycle, etc."*

Proposed actions among SHEDD participants

Among the 5 respondents who provided feedback on the SHEDD screening, 4 participants discussed different actions they expected to take, including buying organic products, not making

assumptions about pollution, sharing environmental information with others, volunteering to conduct research, and visiting the website:

- *Buy organic-even though it's hard to afford.*
- *The encouraged me to not make assumptions about pollution. Small amounts are not necessarily better than large amounts. I have also been empowered to share the stories with co-workers.*
- *I wouldn't mind volunteering to do research.*
- *Checkout the PBS website.*

Proposed actions among ASDM participants

Among the 5 respondents who provided feedback on the ASDM screening, 2 participants expected to volunteer in some way while 2 others pointed to somewhat different actions they expected to take, including not buying imports or conducting additional research on the series' subjects:

- *I shouldn't buy imports! I'd like to find out more about the problem locally.*
- *I will do my part in whatever ways are needed.*
- *Study more on subject.*
- *Wanted to volunteer.*

3.4 Participants' likelihood of visiting the *Strange Day on Planet Earth* website

Participants at each site were asked to rate how likely they were to visit the *Strange Days on Planet Earth* website in the future. **The participants generally reported they were moderately or very likely to visit the website. The mean rating for the NCMNS, AOP, and SHEDD groups was 5.6, while the rating for the ASDM group was nearly a full point higher at 6.4.**

Table 7						
How likely participants were to visit the <i>Strange Days on Planet Earth</i> Website						
1	2	3	4	5	6	7
Not at all likely					(ASDM) 6.4	Extremely Likely
		(NCMNS, AOP, SHEDD) 5.6				

Caution should be taking in interpreting these mean differences, however. It is important to remember that the number of respondents in the groups was uneven and that the mean rating for the AOP was based on a larger sample (n=17) than the other groups, each of which had less than 10 participants.

What participants expected to look up at the website

Participants were asked to describe what they expected to look up while at the *Strange Days on Planet Earth* website. **Looking across the four sites, no one particular area of the website stood out for the majority of the respondents. Just over one-tenth (11%) expected to uncover information on episodes from the series. Meanwhile, 8% expected to look for more information on a particular subject area addressed within the series. Six percent (6%) of the**

respondents each said they expected to look for a teacher’s guide and/or educational applications or planned to research frogs (mentioned among participants at the AOP *Troubled Water* screening). One participant who had seen the *Invaders* episode expected to research invasive species. Finally, one participant didn’t expect to look anything up, and another didn’t expect to access the site as a result of not being able to connect to the Internet. When interpreting the above findings, also note that a fairly large number of respondents, (44%), left this item blank.

Table 8 What participants expected to look up at the <i>Strange Days on Planet Earth</i> website					
What participants expected to look up:	TOTAL (N=36)	AOP (N=17)	NCMNS (N=9)	SHEDD (N=5)	ASDM (N=5)
More information on other episodes	4	2	-	1	1
More information /subject material generally	3	-	2	-	1
Chemicals/toxins/chemicals in Chesapeake Bay	3	3	-	-	-
Surf for teacher’s guides/educational applications	2	-	1	1	-
Frogs/frog research	2	2	-	-	-
Invasive species	1	-	1	-	-
Nothing	1	-	1	-	-
Other	3	2	-	-	1
Can’t connect to Internet	1	-	-	-	1
Left blank	16	8	4	3	1

What AOP participants expected to look up

Among the 17 respondents who provided feedback on the AOP screening, 9 answered this question as follows:

- Three (3) stated that they planned to look up information on chemicals, toxins, and chemicals in Chesapeake Bay when they visit the website:
 - *I plan to see if there is more that I can do beyond avoiding chemicals in the home, buying almost exclusively organic products (produce) and growing my own plants and eggs. Most importantly I would love to have someone ask the question and research what the impact of chemo therapy both in ground H2O and flushed into our seas. Why is it not considered a toxic waste issue?*
 - *Nitrates and phosphates in the Chesapeake Bay*
 - *Toxins.*

- Two (2) said they planned to look up information on frogs and more details about frog research on the website:
 - *Frogs.*
 - *The frog research b UC students and water research by Univ. of Missouri.*
- Two (2) said they planned to look up more information on details of the other episodes, as in: *More environmental programs.*
- Two (2) put down a response that did not fit into the previous categories:
 - *I will surf it to find what appears to be interesting.*
 - *Everything.*

What NCMNS participants expected to look up

Among the 9 respondents who provided feedback on the NCMNS screening, 5 answered this question as follows:

- Two (2) said they planned to look up more information on details and subject material related to the series in general, as in: *More information in details.*
- One (1) planned to search for teacher’s guides that can be used in the classroom: *“I don’t know what’s there. I’ll probably surf and look up teacher’s guides-I work with after school and look to see if there is info in Spanish groups.”*
- Another (1) stated they planned to look up information on invasive species: *“Invasive species.”*
- Finally, one (1) other had nothing planned in particular to look up on the website: *“Nothing in particular. I guess I’d want to know what the other series episodes were about.”*

What SHEDD participants expected to look up

Among the 5 respondents who provided feedback on the SHEDD screening, 3 pointed to different aspects of the site they planned to visit including information about other episodes and educational applications:

- *Other series I didn’t view.*
- *I plan to look up ways to incorporate these videos in educational programming.*
- *Browse through as much as possible.*

What ASDM participants expected to look up

Among the 5 respondents who provided feedback on the ASDM screening, 2 participants each pointed to different aspects they planned to focus on, including episode information and information about preventing invasive species. One participant mentioned not being connected to the Internet and one planned to decide what to visit upon going to the website, and one left the question blank. Their comments included:

- *More info on the next 3 episodes.*
- *Things I can do to prevent spreading invader species.*
- *I'm not connected to the internet.*
- *Will decide when I visit site.*

Conclusions

The purpose of the *Strange Days on Planet Earth* screening evaluation was to solicit participant feedback about the screening events at four consortium sites and to explore participants' expectations for the series and their personal involvement in actions related to the series. The evaluation was made possible as staff from each of the four consortium sites, AOP, NCMNS, SHEDD, and ADSM, agreed to distribute questionnaires at the end of their respective screening events. The number of participants attending each screening event was not confirmed, although the low number of questionnaires returned at three of the four sites ($n < 10$ per site) indicated that the response rate at these sites was low in relation to the number of attendees. The project team explained that this discrepancy was primarily a function of time constraints which precluded more participants from completing the questionnaires at the conclusion of the screening events.

A total of 36 participants completed questionnaires across the four consortium sites, including: 17 participants from the AOP, 9 from the NCMNS, and 5 each from ASDM and SHEDD. Within the sample of 36, the questionnaire respondents were predominately White/Caucasian (80%). Participants' ranged in age from 35 to 55, and overall, there was an equal balance of males and females. A combination of weekly, monthly, and less than monthly viewers of science/nature programs was also represented in the group. Most of the respondents were employed, however, with very few students, retirees, or homemakers represented in the group. Almost half of the respondents said they needed an understanding of science for their work. Most had completed college, and many had at least some graduate school training.

Main Findings

The evaluation found that the screening events were generally perceived as appealing and valuable to the respondents who took the time to provide feedback. Even with the time constraints encountered in administering and completing the questionnaires at the four sites, respondents were, on the whole, consistently able to provide feedback as to why they attended, how they found out about the event, what they found most valuable, and whether and how the series inspired them to take some future action related to the series, including use of the project website.

Perhaps the most notable pattern in the findings. overall, is the frequency with which respondents offered diverse responses to the open-ended questions on the survey. In most cases, respondents gave varied and somewhat unique answers, without one or two major themes being apparent across the majority of their responses. Although the findings from this evaluation are limited in generalizability given the small and limited respondent sample and method of survey administration, planners of future screening events might find it useful to reflect on the diversity

of factors that not only brought participants to the consortium screening events, but also made these events a valuable and motivational experience.

The following section briefly summarizes the main findings from the evaluation:

- **Respondents learned about the screening event through a variety of different sources, without one particular source informing the majority of the participants.** The largest percentage of participants, 44%, said they learned about the screening event through email notices sent from their local consortium site. One-fifth of the group (19%), all AOP participants, said they learned about the event through a local PBS station email, booth, flier, or fellow member. Less than one-fifth of the group (14%), again mostly AOP participants, learned about the event from a friend or family member. One-tenth (11%) of the group, mostly ASDM participants, pointed to notices posted at their consortium site. Only one respondent from all four groups, an ASDM participant, learned about the event from a newspaper, while another ASDM participant was the only respondent to learn about the event from a consortium member newsletter. The remaining sources fell under the ‘Other’ category and were mentioned by only one participant each, including: *belong to docent program, co-sponsor, or visited science center.*
- **Respondents were drawn to the screening events for a variety of reasons, without one main factor standing out for the majority of participants.** The most frequently stated reason for attending the screening was mentioned by nearly two-fifths of the respondents (39%) and involved learning more about the environmental problems featured in the series. Much smaller percentages of respondents offered other reasons, including being employed at the museum/knowing a friend that worked there (14%) or just being generally curious or interested in the event (11%). A few participants (5% each) said they were drawn for other reasons, including: they had heard positive things about the series, the event was an Earth Day event, the event offered a chance to visit their local science center, or because they wanted to hear the invited speaker.
- **Respondents pointed to a variety of different things they found most valuable about the screening event they attended, without one major element standing out for the majority of the participants.** The largest percentage of respondents, nearly one-third of the group (31%), felt that the most valuable part of the screening was learning about threats to the environment – including water toxins, invasive species, pollution, or global warming -- depending on the episode(s) viewed. The next most valuable element was offered by just one-tenth of the respondents (11%) and involved learning about ways to clean and preserve the planet. Discovering that research is being done to address environmental problems featured in the series or finding out more about the fragility/connectedness of ecosystems were each also mentioned by less than one-tenth of the respondent group (8%). A small number of participants (2% each) said they liked listening to the speaker or being exposed to new educational materials. Finally, one participant liked that the event inspired her to volunteer in some way.
- **Respondents generally found Edward Norton to be a moderately effective host for the *Strange Days on Planet Earth* television series.** Using a scale of 1(ineffective) to 7 (very effective), the highest mean ratings, overall, were provided by the ASDM and AOP

participants at 6.4. The mean rating for SHEDD was an intermediate 5.4, with the NCMNS rating falling somewhat lower at 4.9. Caution should be taking in interpreting these mean differences, however. It is important to remember that the number of respondents in the groups was uneven and that the mean rating for the AOP was based on a larger sample (n=17) than the other groups, each of which had less than 10 participants.

- **Generally speaking, respondents showed high expectations for the upcoming series. Most participants expected they would: like the series, find the content interesting, perceive the visuals to be exciting, learn a lot, and recommend the series to others.** There was some variability in the mean ratings for these elements by consortium site, but here again, caution should be taken in interpreting these differences given the small and uneven size of the respondent groups in each case.
- **Most respondents (86%) planned to watch one or more episodes of *Strange Days on Planet Earth* when it aired on PBS, with *Troubled Waters* and *Invaders* being the two episodes respondents most frequently expected to view.** Two-thirds of the respondents (66%) planned to watch *Troubled Waters* while 64% planned to see *Invaders*. More than half (55%) of the participants listed *Predators*, and half (50%) listed *The One Degree Factor*. Participants who did not plan on watching any episodes from the series explained that they either missed the first two episodes (which had already aired before the screening event at the AOP), or pointed to: time constraints, the potential for competing programming to divert their attention, or the lack of television access at home.
- **Respondents generally felt inspired to take at least some action after watching the episode(s) screened from *Strange Days on Planet Earth*, although no one action stood out for the majority of participants.** It is important to note though that a fairly large percentage of respondents (22%) left this item blank. The most frequently cited action was visiting the *Strange Days on Planet Earth* website, mentioned by 11% of the participants. A few other actions were each mentioned by 8% of the participants, including: researching the series' topics more in-depth through magazines, newspaper articles or websites, buying organic products, supporting research groups and legislation, joining an organization/engaging others, and generally helping/volunteering in some way.
- **When asked directly about their likelihood of visiting the *Strange Days on Planet Earth* website, most respondents indicated they were moderately or very likely to visit the site.** The mean rating for the NCMNS, AOP, and SHEDD groups was 5.6, while the rating for the ASDM group was nearly a full point higher at 6.4. Here again though, it is important to remember that the number of respondents in the groups was uneven and that the mean rating for the AOP was based on a larger sample (n=17) than the other groups, each of which had less than 10 participants.
- **When asked to identify what they expected to look up at the *Strange Days on Planet Earth* website, no one particular area of the website stood out for the majority of respondents.** It is important to note though that nearly half of the respondents (44%) did not answer this particular question. Just over one-tenth (11%) expected to uncover information on other episodes featured in the series. Meanwhile, 8% of the participants expected to look for more information on a particular subject area addressed in the series.

Six percent (6%) of the respondents each said they expected to look for a teacher's guide and/or educational applications or planned to research frogs (mentioned among participants at the *Troubled Water* screening). One participant who had seen the *Invaders* episode expected to research invasive species. Finally, one participant didn't expect to look anything up, and another didn't expect to access the site as a result of not being able to connect to the Internet.