

Survey of International Dark-Sky Association Members: Findings and Implications

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EXECUTIVE SUMMARY

The survey of IDA members was administered in fall 2016. Email and mail invitations, plus email reminders, produced a 34% response rate with 1,317 members taking the survey.

Just over 95% of members are very or somewhat satisfied with IDA's work.

Joining, Participating, and Giving

28% of IDA's membership base has maintained their membership for 11 or more years, indicating some degree of devotion to the organization; however, half of all members joined in the past five years, suggesting that light pollution continues to garner new interest. Given the recent influx of members but steady overall membership numbers, IDA may want to examine the circumstances leading to member turnover.

Only 18% of members initially learned about IDA via a friend or colleague. (Has the organization considered a member-get-a-member campaign?)

Only 12% participate in an IDA chapter. The most common reasons for *not* participating in a chapter were not knowing about them or not having one nearby, suggesting the potential for growth in chapter participation.

58% of members have participated in activities to reduce light pollution in the last five years.

Nearly 80% of members feel \$35/year is an appropriate membership fee; however, a few members with lower incomes requested reduced fees or the option to pay over several months.

Just under 20% of members annually donate more than the membership fee to IDA.

Programs

Members reported the greatest overall familiarity with the International Dark Sky Places program and lowest familiarity with sea turtle conservation and consulting for government and businesses.

Members want greater awareness of light pollution among the general public through increased marketing and media exposure, as well as greater collaboration with common interest groups (e.g., environmental organizations, professional lighting associations). Additionally, members repeatedly encouraged IDA to more directly target children and teens in outreach and to be more aggressive in pursuing change.

Many members demonstrated unfamiliarity with IDA procedures, particularly regarding the establishment of Dark Sky Places and chapters. More specifically, these members appeared unaware of their ability to initiate the process and instead expected IDA to do so.

Members repeatedly requested for IDA to offer resources that the organization already provides (e.g., downloadable presentations and handouts), suggesting that a refresher on available resources would be useful.

Communications

Members are overwhelmingly satisfied with IDA's communications. Mailings and emails and *Nightscape* are the most widely read. Less than one-quarter of members reported utilizing the various forms of social media communication.

In spite of their satisfaction, many members are unaware of IDA's various modes of communication, do not know which communications they receive, do not know how to (un)subscribe for a particular communication, and/or expressed frustration at not receiving the communications for which they have subscribed.

Although only 17% of members reported dissatisfaction with the potential transition to paperless communication, these members actively voiced their displeasure throughout multiple open-ended questions in the survey. A few members exhibited anger at the potential transition (e.g., through name-calling and threatening to cancel their membership), but most offered justifications for their paper preference, such as having difficulty reading material on screens and enjoying leaving the hardcopy *Nightscape* in a medical waiting room for others to read. Moreover, several members indicated that they do not own a computer and admitted that they might forget about IDA without occasionally receiving something tangible from the organization.

Dark Sky-Related Values and Experiences

The highest rated benefits of a dark night sky were "appreciating nature's beauty" and "stargazing with the unaided eye."

Over 90% of members stargaze at least once per month, though only 19% have an obvious view of the Milky Way from their home.

Demographics

Member demographics show significant opportunity for diversifying IDA's membership base. Specifically, the current membership underrepresents students and young adults, women, people of color, persons living outside the United States, and the working class.

Themes Evident Across Multiple Survey Questions

Several members do not recognize their power to initiate change. For example, one member wrote, "We need a real advocate for dark skies in [US state]," and another wrote, "I could use an ordinance that addresses light trespass from neighbors," but these members did not exhibit an understanding or belief that they could contribute to the solution themselves. Comments such as these suggest that members may not feel sufficiently empowered to pursue change or that they are expecting others (or IDA headquarters) to advocate for the local change they wish to see.

Similarly, many members expressed a desire to advocate for dark skies but stated they did not know what to do or where to begin.

Several members called for IDA to increase its efforts in countries other than the United States. Specific suggestions included producing materials in languages other than English,

establishing offices outside the US, ensuring dark sky friendly fixtures are available for purchase in other countries, and developing model lighting ordinances that are useful in cultural and political contexts beyond the United States.

Many members expressed grief and/or loss in the brightening night sky. Although occasionally expressed explicitly (e.g., “I mourn the loss of the night sky tremendously”), more often this sentiment appeared implicitly in stories of a particular night sky that has brightened over time.

Several members expressed anger and frustration at their experiences with glare and light trespass, and well as at the wasted energy and money in light pollution. As one member noted, “There is actually a lot of anger that no one is harnessing.”

Despite IDA spending the last few years (at least) establishing itself primarily as an environmental—rather than an astronomical—organization, members still demanded that IDA distance itself from astronomy with comments such as, “The IDA is too focused on and influenced by the astronomy community including both amateur and professional.” Similarly, members instructed the organization to focus on the environmental (and human health) impacts of light pollution, rather than its impact on astronomy. As one member noted, “It’s not all about stargazing.” Interestingly, many members with an interest in astronomy perceive IDA as disconnected from the astronomy community and wish to see stronger ties, especially with astronomy clubs, because, as one member lamented, “Most amateur astronomers complain and do nothing.”

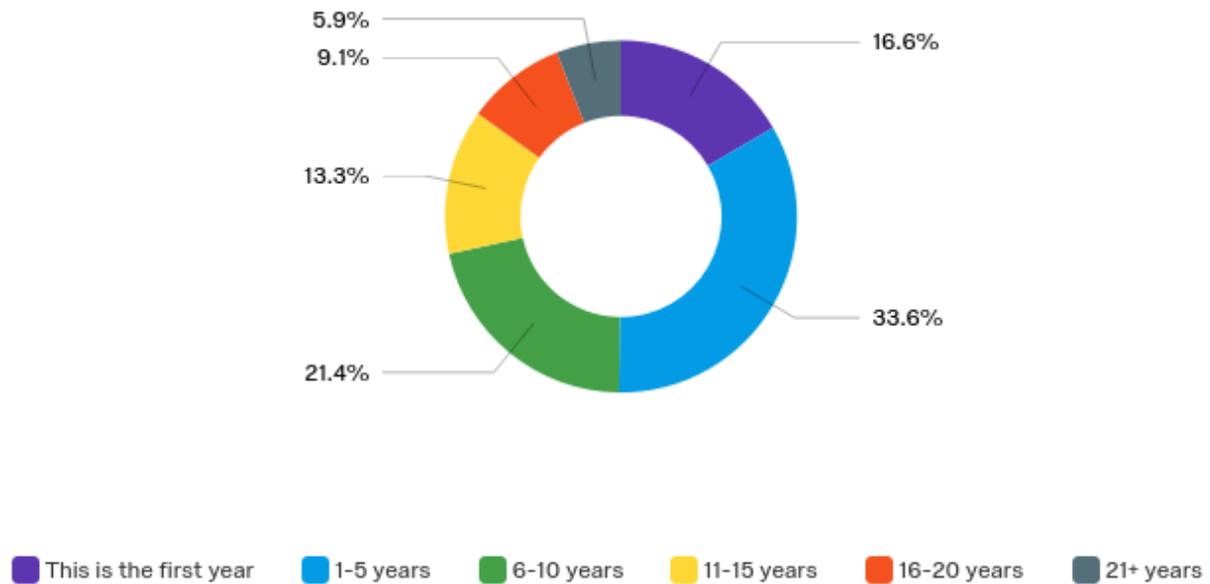
Members disagreed about the role the lighting industry should play in IDA’s work. Some demanded that the organization “challenge the lighting industry more” and go “back to [the] basics without industry interference.” Members also claimed that IDA’s work has been negatively impacted by industry collaboration. As one member wrote, “be bold to recognize the lighting industry has affected the effectiveness of our advocacy work; we have compromised too much in trying to make ‘friends’ not enemies.” In contrast, several members encouraged IDA to pursue greater collaborations with the lighting industry—designers, manufacturers, retailers, and professional associations. Moreover, members employed in the field of lighting requested recognition for their dark sky friendly work and wished for an end to the shaming of the entire lighting industry.

SURVEY RESULTS

Joining, Participating, and Giving

Length of IDA membership, chapter involvement, personal advocacy, and donations

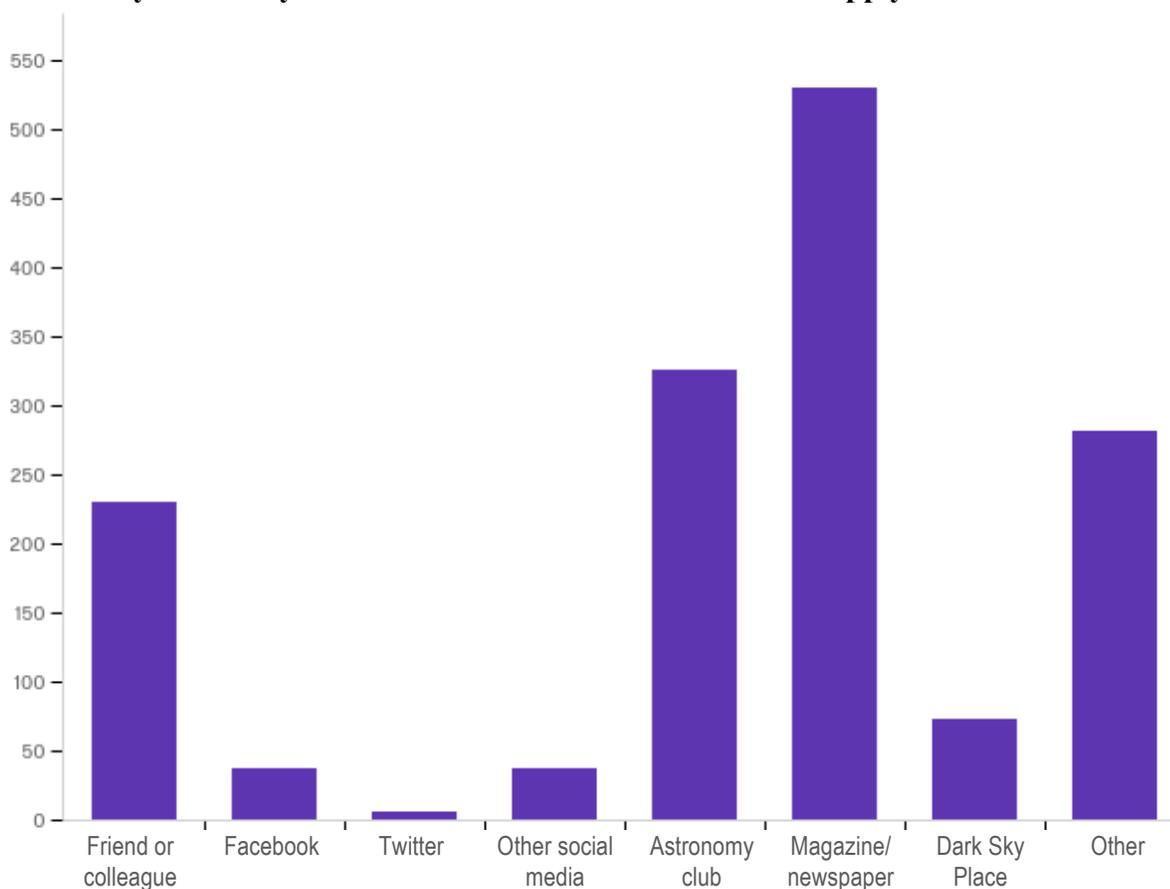
For approximately how many years have you been an IDA member?



Years of membership	%	Count
This is the first year	16.6	218
1-5 years	33.6	441
6-10 years	21.4	281
11-15 years	13.3	175
16-20 years	9.1	120
21 years or more	5.9	78
Total	99.9*	1,313

*Due to rounding, some percentages in this report do not add up exactly to 100

How did you initially learn about IDA? Please select all that apply.



How members learned about IDA	%*	Count
Friend or colleague	17.6	231
Facebook	2.9	38
Twitter	0.5	7
Other social media	2.9	38
Astronomy club	25.0	327
Magazine or newspaper	40.5	531
IDA-designated Dark Sky Place	5.6	74
Other	21.5	282

*Percent of *total respondents*; since members could choose more than one answer, this column does not add up to 100

- Of the 282 members who selected “other”
 - 69 reported learning about IDA via the internet, often a google search
 - 39 learned via a public event (e.g., conference, lecture, star party)
 - 78 indicated they did not remember how they learned about IDA
- For members who joined within the last five years, magazine or newspaper, astronomy club, and friend or colleague continued to be the top three ways they learned about IDA

For what reason(s) did you choose to join IDA?

892 members responded to this question. As an open-ended question, respondents were free to type whatever they wished. Nonetheless, several patterns emerged in their responses.

Over 40% of the responses consisted of a brief statement indicating that IDA's work is valuable, but these members offered no context for *why* they value the work. These included statements such as "believe in the mission," "support the goals," "preserve dark skies," and "support reducing light pollution" (378 members).

Other members indicated their motivation for valuing IDA's work. (Note that, depending on the response, a member may have been counted in more than one of the categories below.)

Environmental

- Wildlife conservation; eliminate impact of light pollution on wildlife (41)
- Energy conservation; aware of consequences of wasted energy (27)
- Environmental: nonspecific or other reason not listed above (46)

Astronomy and stargazing

- Supportive/Interested as an amateur/professional astronomer or astronomy educator (58)
- I love the night sky/stars/darkness (57)
- Desire to see a dark sky and/or to have locally dark skies (35)
- Support DSPs; want others to be able to enjoy/experience the night sky (18)
- Astronomy: nonspecific or other reason not listed above (43)
- Stargazing: nonspecific or other reason not listed above (32)

Health, safety, and lighting

- Concerns about human health (26)
- Concerns about safety, security, and/or glare (18)
- My work/volunteering involves lighting (19)
- To help improve outdoor lighting (16)

With responses such as "find ways to participate" and "get support for raising awareness where I live," 94 members joined IDA to become active in solving the problem of light pollution.

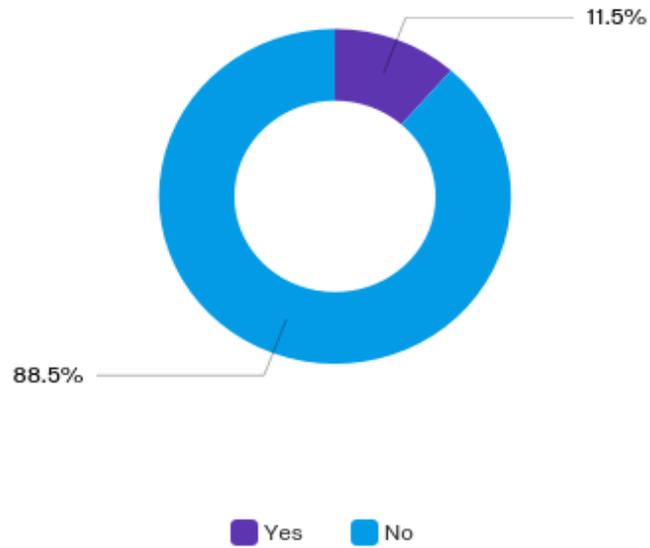
Another 43 members joined to educate themselves or access resources about light pollution. 31 members joined "to provide financial support," with several indicating that they did so in place of their own advocacy work.

Several members noted a specific incident that prompted their decision to join, such as their neighbor installing new floodlights, their city installing 4000K streetlights, or completing a school project about light pollution.

Other common reasons included:

- Suggested/Influenced by a specific person or recommended by astronomy club (22)
- To preserve the beauty/aesthetics of the night sky (20)
- Connect and share information with other advocates (18)

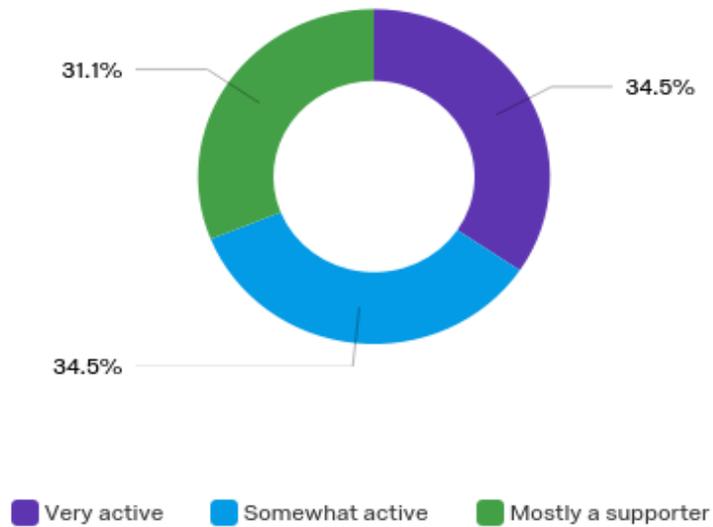
IDA has several locally-based chapters focused on protecting the night sky in nearby communities. Do you participate in one of these chapters?



Participate in a chapter?	%	Count
Yes	11.5	151
No	88.5	1,166
Total	100	1,317

How active are you in your chapter?

(Asked only of members who reported “yes” to chapter participation)



Level of chapter participation	%	Count
Very active	34.5	51
Somewhat active	34.5	51
Mostly a supporter	31.1	46
Total	100	148

What could IDA do to better support your chapter?

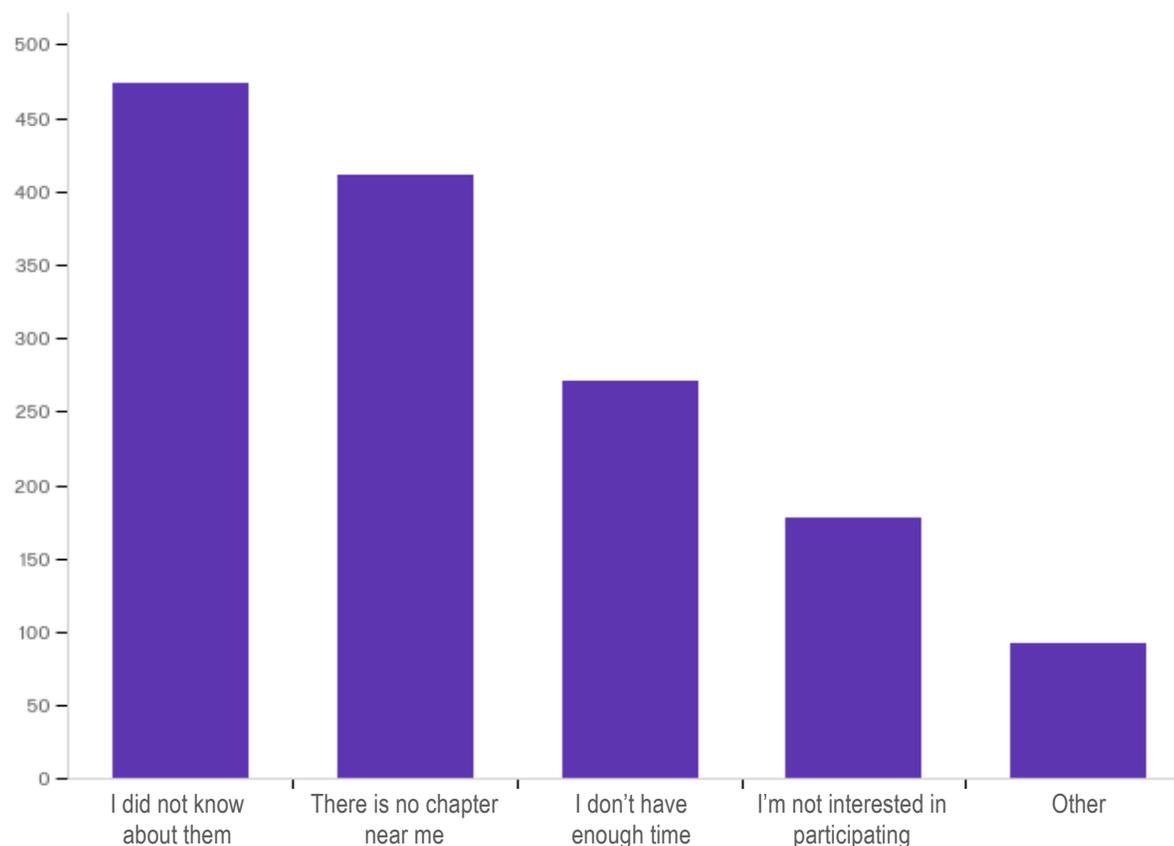
(Asked only of members who reported “yes” to chapter participation)

Out of the 151 members who participate in a chapter, 82 responded to this question. Sixteen reported that no additional support is needed and/or that the current support they receive is good. (Note that Katherine was newly hired when the survey was administered. Her position has provided some of the support requested by chapters.)

The most common support requests included:

- Increased communication with headquarters, among members, and among chapters (13 members)
- Assistance in establishing, organizing, and operating chapters, especially in recruiting members and finding a means for chapters to have financial resources (10)
- Provide funding (8)
- Provide information (e.g., data sources on the impacts of light pollution) (6)
- Increase the sharing and recognition of chapter work (6)

For what reason(s) do you not participate in an IDA chapter? Please select all that apply.
(Asked only of those members who reported “no” to chapter participation)

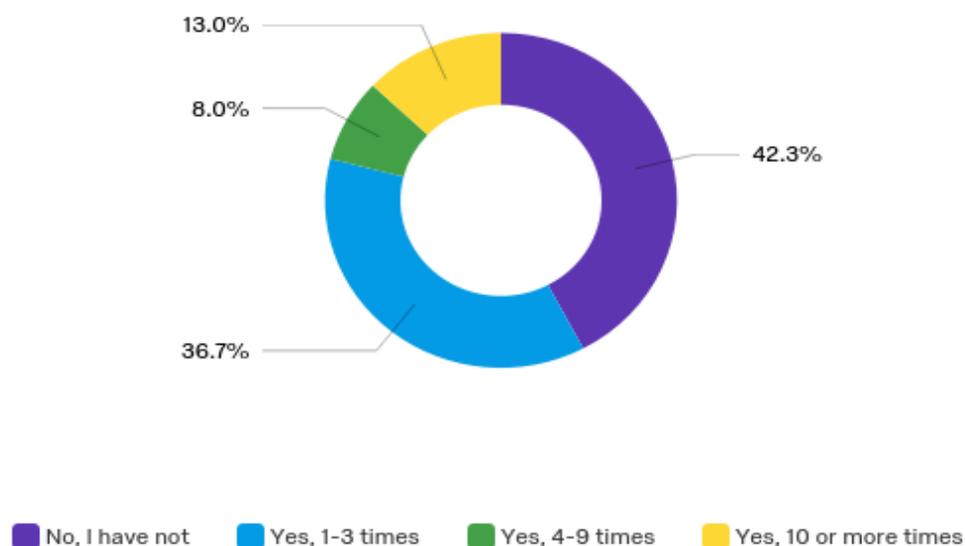


Reasons for not participating in chapters	%*	Count
I did not know about the chapters	41.2	474
There is no chapter near me	35.7	411
I don't have enough time	23.5	271
I'm not interested in chapter participation	15.5	178
Other	8.0	92

*Since members could choose more than one answer, this column does not add up to 100

- Of the 92 members who selected “other”
 - 13 indicated not knowing whether or not there is a chapter near them
 - 11 plan to participate but have not gotten around to it
 - 10 have medical or mobility issues making participation difficult
 - 9 did not receive a response after contacting their chapter and/or attending a chapter event
 - 8 reported that their chapter appears (or is) inactive

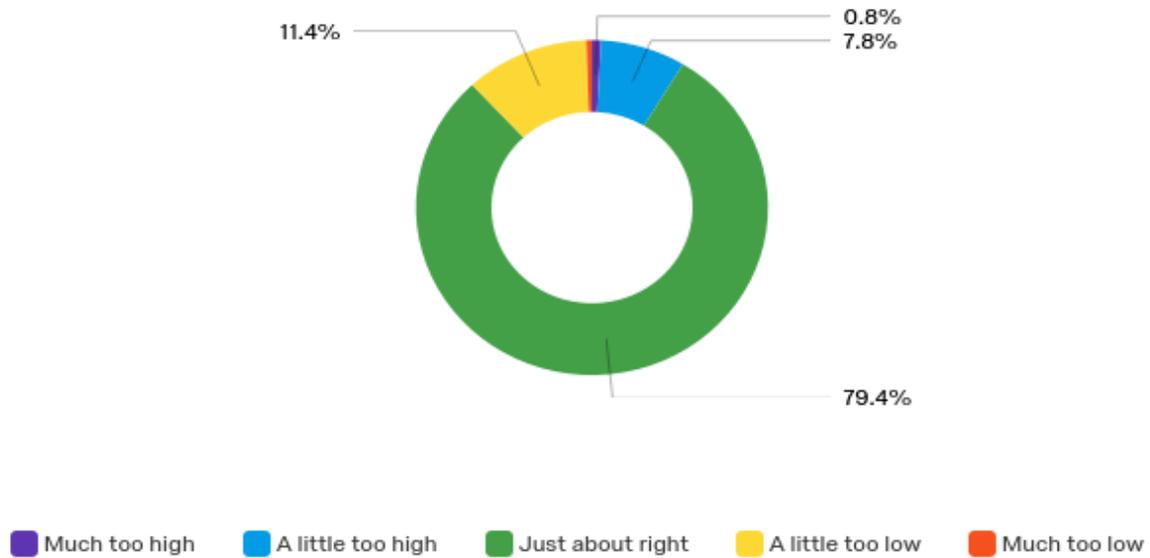
During the *last five years*, have you personally participated in activities to reduce light pollution (e.g., writing to a political or business leader, proposing a lighting ordinance, etc.)?



Participated in light pollution advocacy?	%	Count
No, I have not	42.3	511
Yes, 1-3 times	36.7	444
Yes, 4-9 times	8.0	97
Yes, 10 or more times	13.0	157
Total	100	1,209

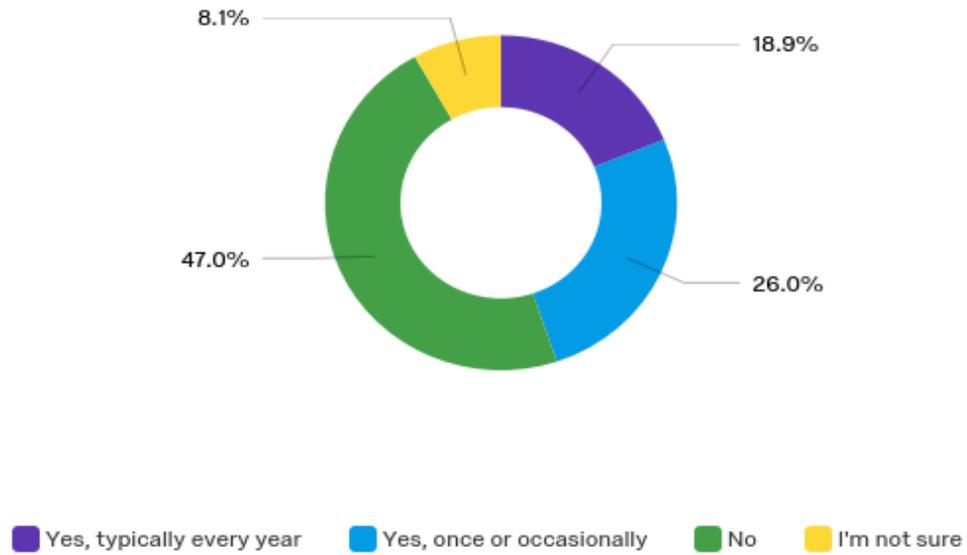
- Chapter participation is connected with greater participation in light pollution reduction efforts. For chapter participants, 95.6% engaged in light pollution reduction activities in the last five years; for members who do *not* participate in a chapter, 53.0% engaged in light pollution reduction activities.
- Similarly, the percentage of members who participated in one or more instances of light pollution reduction increased along with stargazing frequency:
 - 43.7% for members who never stargaze
 - 58.3% for members who stargaze 3-5 evenings per month
 - 73.4% for members who stargaze 11 or more evenings per month
- The percentage of members who participated in light pollution reduction efforts was nearly identical for members who work full-time (58.0%) compared to those who are retired (57.0%).

An IDA membership currently costs \$35/year. What do you think about this amount?



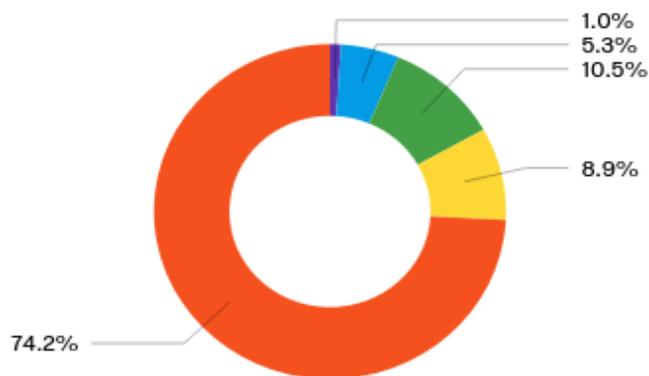
Opinion of membership cost	%	Count
Much too high	0.8	10
A little too high	7.8	93
Just about right	79.4	947
A little too low	11.4	136
Much too low	0.5	6
Total	99.9	1,192

Have you made financial contributions to IDA beyond the annual membership fee?



Donation beyond membership fee?	%	Count
Yes, typically every year	18.9	227
Yes, once or occasionally	26.0	313
No	47.0	566
I'm not sure	8.1	98
Total	100	1,204

Have you considered designating a gift to IDA through your estate plans, as an IRA beneficiary, or via similar methods?



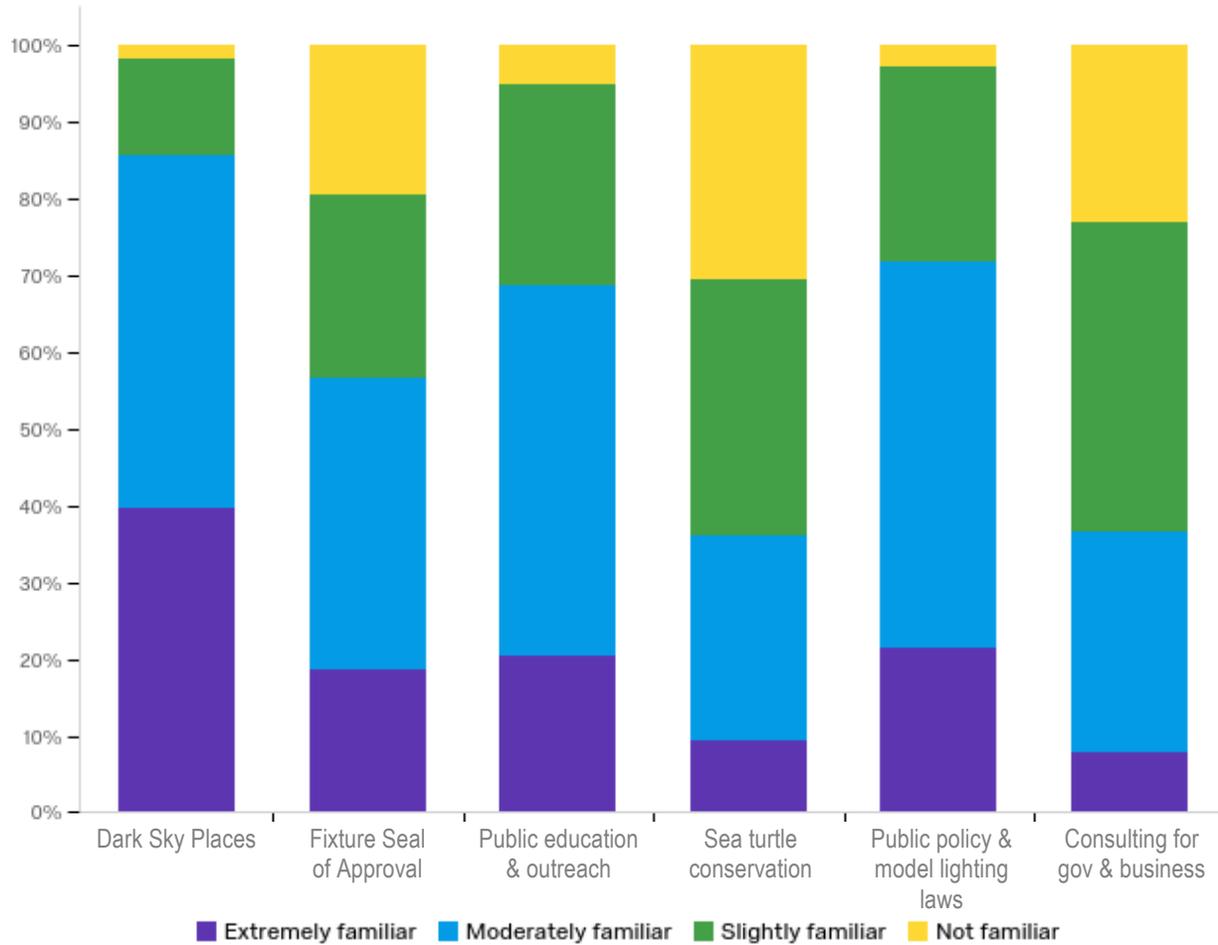
■ Yes, already made arrangements
 ■ Yes, will likely do so
 ■ Yes, but undecided
■ Yes, but likely will not
 ■ No, haven't considered this

Considered designating a gift?	%	Count
Yes, and I have already made the arrangements	1.0	12
Yes, and I will likely do so	5.3	64
Yes, but I'm undecided	10.5	126
Yes, but I likely will not do so	8.9	107
No, I have not considered this	74.2	888
Total	99.9	1,197

Programs

Members' familiarity with, opinions of, and suggestions for IDA programs

Below is a list of IDA's major programs. Please indicate your level of *familiarity* with each program.



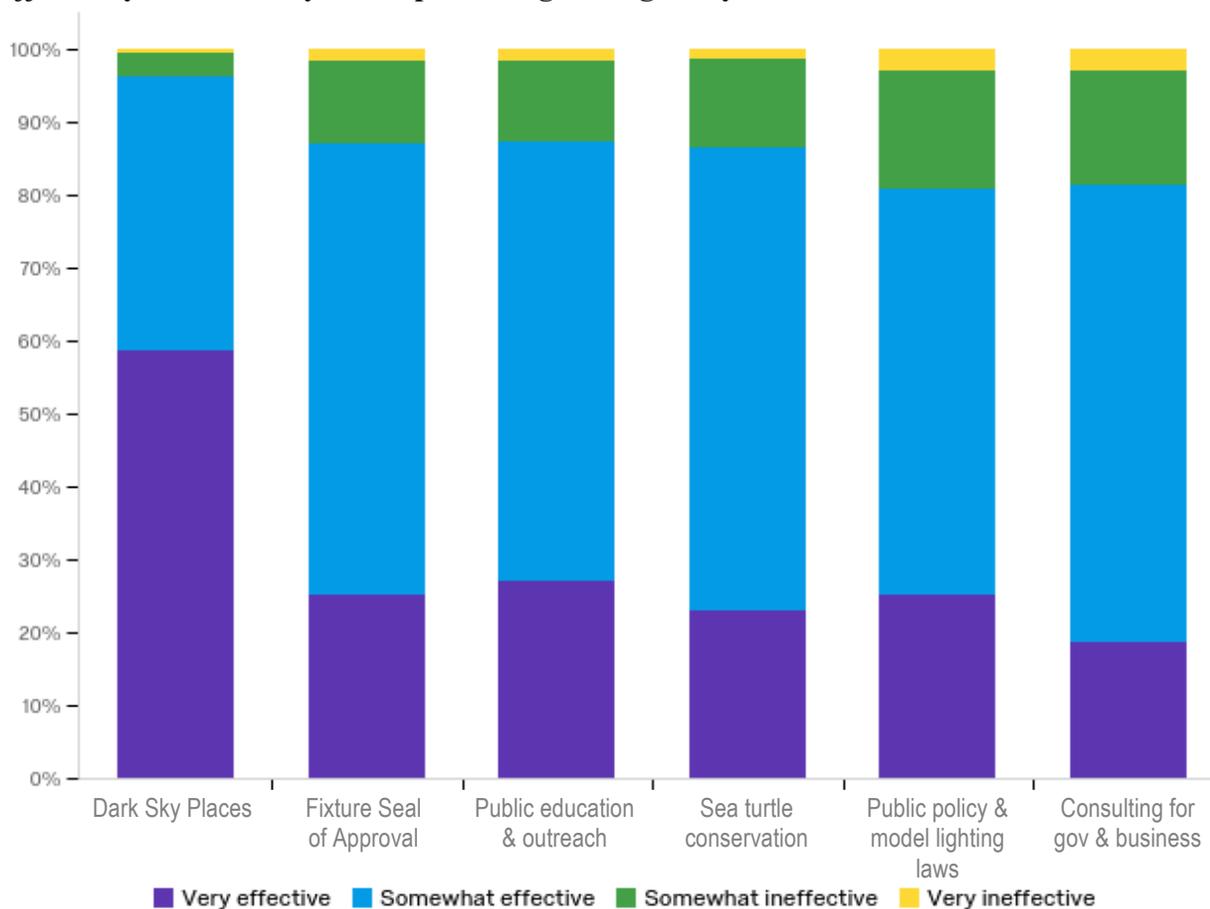
Levels of familiarity were clarified for survey participants in the following way:

- Extremely familiar = I'm aware of recent progress
- Moderately familiar = I could describe this to a friend
- Slightly familiar = I've heard of this
- Not familiar = I wasn't aware IDA was doing this

Program	Extremely familiar	Moderately familiar	Slightly familiar	Not familiar	Total
International Dark Sky Places	39.6% (517)*	46.0% (601)	12.5% (163)	2.0% (26)	100.1% (1,307)
Fixture Seal of Approval	18.6% (242)	37.8% (492)	23.9% (311)	19.6% (255)	99.9% (1,300)
Public education & outreach	20.5% (266)	48.2% (625)	26.0% (337)	5.3% (69)	100% (1,297)
Sea turtle conservation	9.3% (121)	26.8% (348)	33.3% (432)	30.6% (398)	100% (1,299)
Public policy & model lighting laws	21.5% (280)	50.3% (656)	25.3% (330)	3.0% (39)	100.1% (1,305)
Consulting for government & business	7.8% (101)	28.8% (375)	40.2% (522)	23.2% (302)	100% (1,300)

*Parentheses contain the count for each category

For the programs that you indicated having some degree of familiarity, please indicate how effective you think they are at protecting the night sky.



Program	Very effective	Somewhat effective	Somewhat ineffective	Very ineffective	Total
International Dark Sky Places	58.8% (727)	37.7% (466)	3.1% (38)	0.5% (6)	100.1% (1,237)
Fixture Seal of Approval	25.3% (245)	61.9% (600)	11.4% (110)	1.4% (14)	100% (969)
Public education & outreach	27.2% (265)	60.2% (588)	11.1% (108)	1.5% (15)	100% (976)
Sea turtle conservation	23.1% (182)	63.5% (500)	12.3% (97)	1.1% (9)	100% (788)
Public policy & model lighting laws	25.4% (301)	55.6% (659)	16.1% (191)	3.0% (35)	100.1% (1,186)
Consulting for government & business	18.9% (168)	62.7% (559)	15.6% (139)	2.8% (25)	100% (891)

- In their response to the open-ended question following this one, 13 members wrote that they have no way of measuring or evaluating the effectiveness of IDA's programs.

Are there any new programs or initiatives that you would like to see IDA invest resources? Do you have suggestions to help make our current programs more effective?

381 members responded to this question; however, 55 of those responses were “no” or “I’m not sure.” (An additional 36 people typed a response that did not answer the questions, such as a clarification to one of their prior responses.)

The majority of responses called for increased outreach and collaboration with the shared sentiment that “not enough people know or care” about light pollution:

- More/better marketing and media exposure; become more mainstream; educate the general public (49 members)
- Offer more materials and talking points (both simple and technical) for members to use and greater directions for how members can get involved in outreach (27)
 - Specific examples included how to work with energy companies, the private sector, and the public sector; how to choose proper fixtures; what to do when writing an elected official fails; and how to reach out to lighting abusers
 - Members also requested that IDA update existing materials to include LEDs
- Offer or support education, programs, and advocacy opportunities for children and teens, such as field trips to DSPs and downloadable science curriculum (19)
- Engage in local and/or state-level lobbying (19)
- Educate and/or collaborate with city governments; departments of planning, development, public works, and transportation; elected officials (19)
- Collaborate and develop stronger connections with environmental organizations and environmental educators (10)
- Engage in national-level lobbying to encourage federal regulation (10)

Overall, members suggested greater engagement and collaboration with a wide variety of established and potential common interest groups. In addition to those noted above, they mentioned colleges and universities, architectural associations and academic programs, homeowners’ associations, law enforcement, astronomy clubs, professional lighting associations, developers, advocacy groups for older adults, faith communities, and more.

Several members suggested establishing rating systems—for fixtures, ordinances, city lighting, and/or sky quality—and publishing the results in order to set standards, open conversations, and/or shame the worst offenders.

Some members did offer suggestions for existing programs, as well as the chapter initiative:

Fixture Seal of Approval

- Increase overall awareness and information about the program, as well as participation (7)
- Partner with home improvement chains to offer more dark sky friendly options and/or to create informative in-store displays (5)
- More encouragement for the manufacture of (aesthetically pleasing) dark sky friendly fixtures, particularly for residential use (4)

- Other comments mentioned the need for more information on where to buy fixtures, to specify the importance of installation and Kelvin rating, and inquiries about fixtures available outside the US

Dark Sky Places

- More effort into Dark Sky Communities, establishing Dark Sky Parks in cities, and otherwise darkening the sky where people *live* (3)
- Note the best times to visit the parks and provide a calendar of events allowing advanced planning for visits (2)
- Make the designation process easier (2)
- Other suggestions included establishing an accreditation program for businesses, sharing best practices for earning the designation, and more outreach to the communities surrounding DSPs

Public Policy and Model Lighting Laws

- Requested guidance for how to ensure enforcement of lighting laws or expressed the desire for IDA to hold localities and elected official accountable to follow established ordinances (6)
- Simplify the MLO, make it easier to understand, and/or save the industry jargon for an appendix (4)
- Others suggested that LEDs be included, that homeowners not be exempted, and inquired about making the MLO useful in the political contexts of other countries

Local Chapters

- Push for more chapters and local involvement; teach members how to form a chapter (7)
- More outreach to chapters and education for them (3)
- Other suggestions included increasing information-sharing across chapters, providing legal support to enforce laws and ordinances, and providing satellite data to help chapters identify properties with the greatest opportunities

Members also commented about *how* and *where* IDA works. For example, regarding IDA's overall message, members called for the organization to place more focus on environmental issues and climate change (13), safety concerns (12), and human health impacts (10). Seven members noted that IDA is "USA focused" and requested more work in other countries, including the need for guidance applicable in contexts other than the US political system and outreach materials in languages other than English.

Notably, many members requested that IDA engage in work or offer resources that already exist, such as providing members with a "canned" presentation about light pollution.

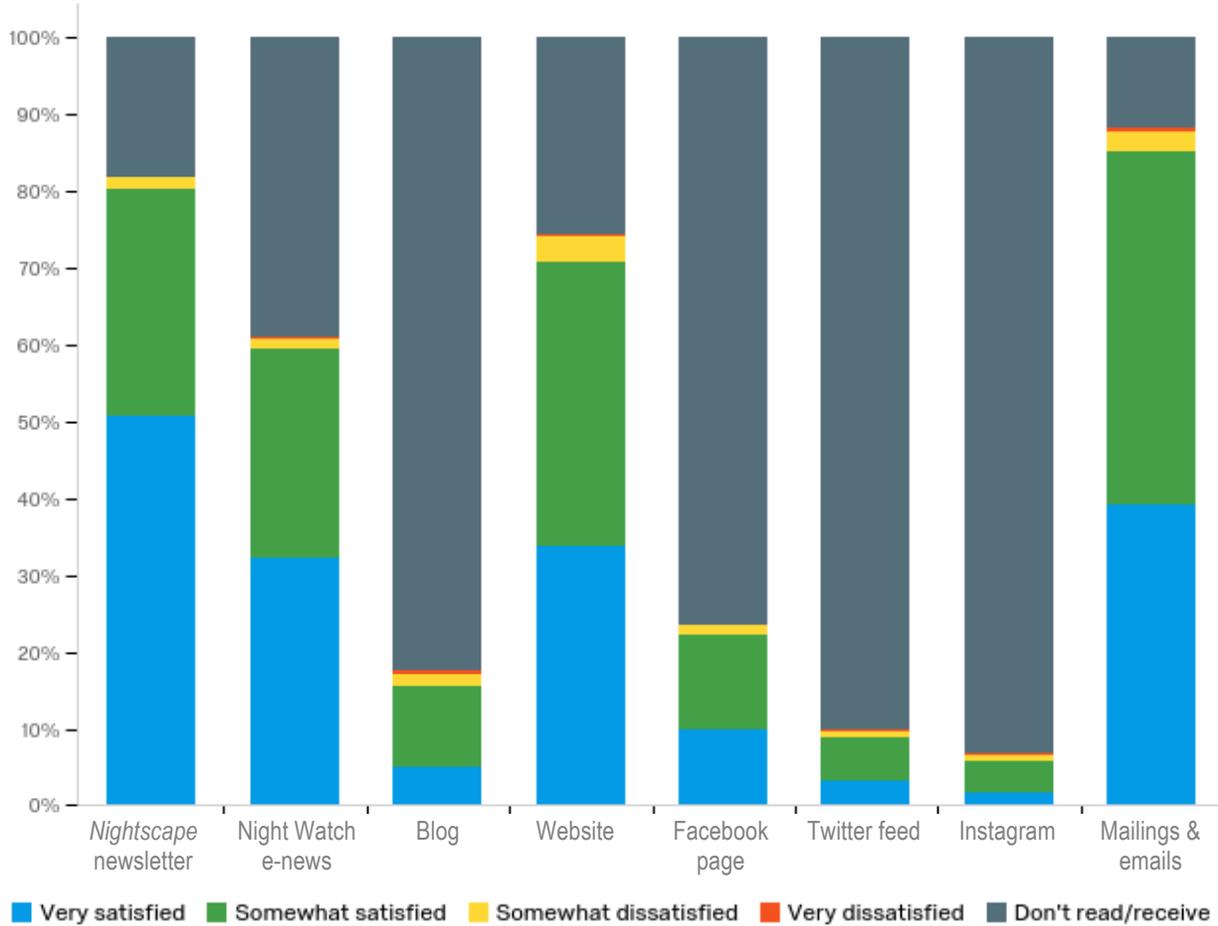
Finally, members suggested a number of new programs and initiatives, such as:

- Establish a dark sky certification program for households (similar to the National Wildlife Federation's backyard wildlife habitat program)
- Recruit a well-known, high profile person to advocate for dark skies
- Celebrate lighting designers doing dark sky friendly work
- Gift memberships to architectural students and/or academic departments

Communications

Members' use of, and satisfaction with, IDA's various communications

IDA utilizes various means of communication with members. Please rate your satisfaction with the following forms of communication.



Communication	Very satisfied	Somewhat satisfied	Somewhat dissatisfied	Very dissatisfied	Don't read or receive	Total
<i>Nightscape</i> newsletter	50.7% (613)*	29.4% (355)	1.5% (18)	0.2% (2)	18.2% (220)	100% (1,208)
Night Watch e-news	32.2% (386)	27.3% (327)	1.2% (14)	0.3% (3)	39.1% (469)	100.1% (1,199)
Blog	4.9% (59)	10.5% (125)	1.7% (20)	0.5% (6)	82.4% (983)	100% (1,193)
Website	33.8% (408)	36.9% (445)	3.3% (40)	0.3% (4)	25.7% (310)	100% (1,207)
Facebook page	9.9% (119)	12.2% (147)	1.2% (15)	0.2% (3)	76.4% (920)	99.9% (1,204)
Twitter feed	3.2% (38)	5.7% (68)	0.7% (8)	0.4% (5)	90.0% (1,075)	100% (1,194)
Instagram	1.6% (19)	4.1% (49)	0.9% (11)	0.2% (2)	93.2% (1,110)	100% (1,191)
Mailings and emails	39.2% (478)	45.7% (558)	2.6% (32)	0.7% (8)	11.8% (144)	100% (1,220)

*Parentheses contain the count for each category

How might IDA improve any of the communications listed above?

276 members typed comments to this question; however, 49 simply indicated that they did not have suggestions to offer. An additional 20 members offered affirmation that the current communications are effective as is and/or that they are satisfied.

11 members admitted to not keeping up with the communications; another 16 indicated that they did not know some of the listed communications existed or that they were unsure which ones they received. Most frequently confused were *Nightscape*, Night Watch, and the blog.

Seventeen members used the space to indicate that they do not participate in social media.

Of members who did offer suggestions, 19 focused on the website. These particular comments have been included in the analysis of a different survey question about web resources. (See page 29.)

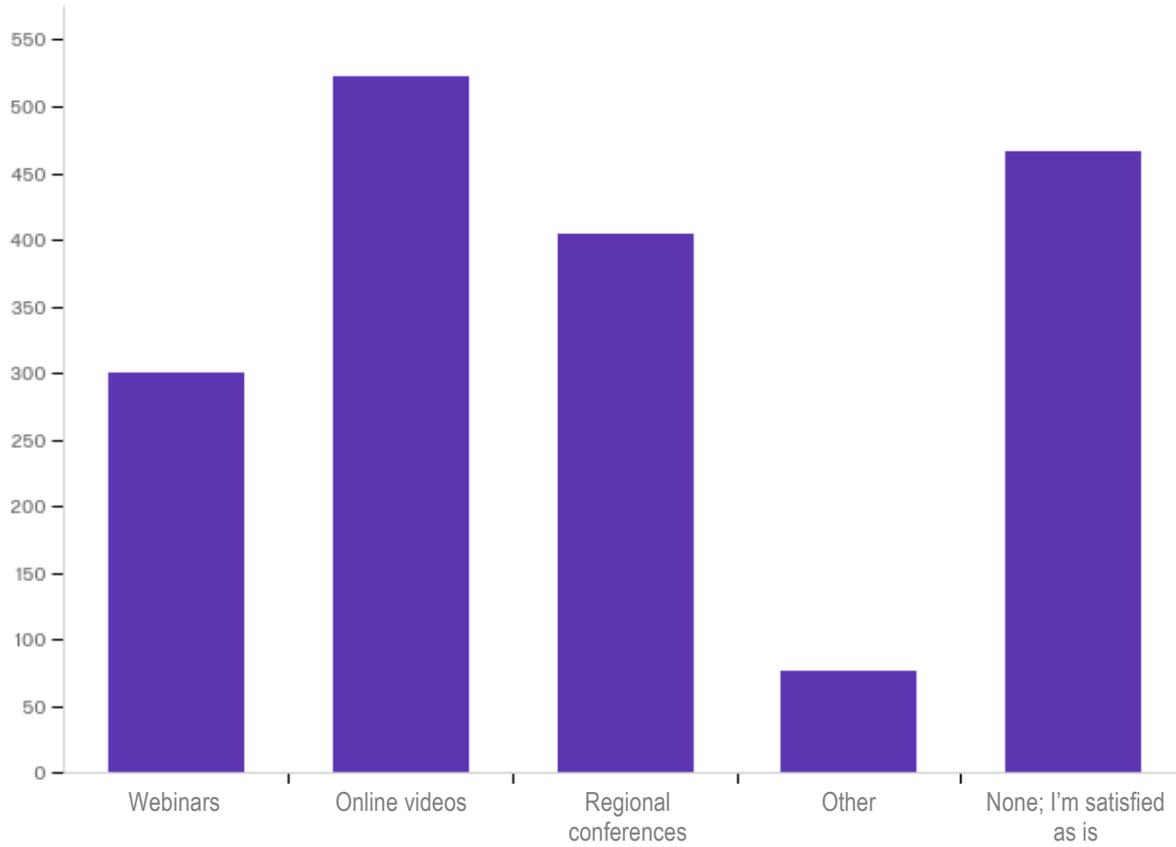
15 members articulated dissatisfaction with IDA's possible transition to paperless communication. (Also see page 26.)

The most common suggestions were:

- More on how and where action is being taken, particularly locally-focused stories of how people effected change in their community (12 members)
- Ensure members know about each type of communication, including how to access and opt out of receiving each one (11)
 - For example, nine members complained that they do not receive *Nightscape* anymore, though they want to; another five members made similar comments about emails
- Continue to build audiences, rather than only preaching to the already-converted (9)
- Streamline the communications because there are too many channels (8)
- More attention devoted to remediation and what members can do to protect the night sky, ranging from simple tasks to getting laws passed (7)

Additional suggestions included requests for podcasts; more t-shirts; addressing the emotional toll of trying to protect the night sky; updates about new IDA-approved fixtures; a members-only section of the website; and encouragement to ask for members' activism, not just their money.

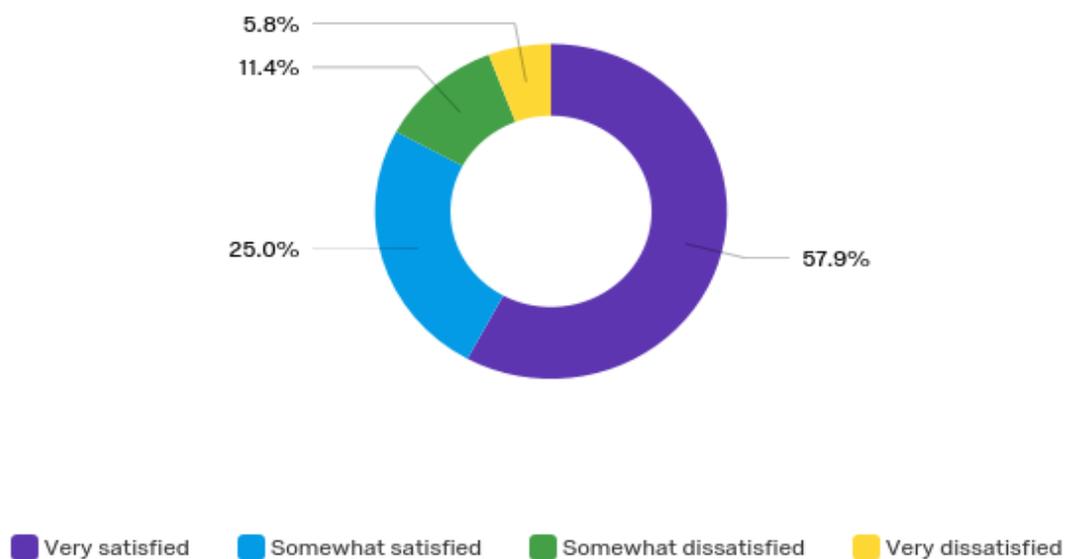
Which of these additional ways would you like to receive information from IDA?



Potential new communications	%*	Count
Webinars	24.8	300
Online instructional and/or informational videos	43.2	523
Regional conferences or meetings	33.4	404
Other	6.4	77
None; I'm satisfied with the current communications	38.6	467

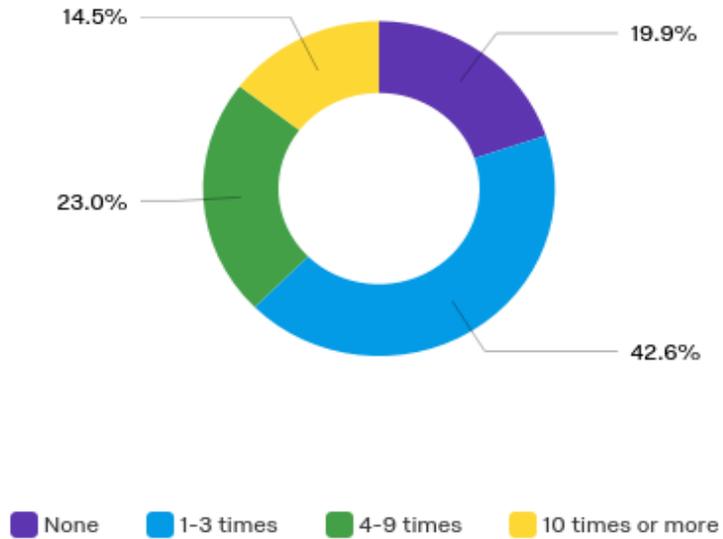
*Since members could choose more than one answer, this column does not add up to 100

To save energy and resources, IDA is considering transitioning toward paperless means of communication. Please rate how you would feel about this change.



Level of (dis)satisfaction	%	Count
Very satisfied	57.9	724
Somewhat satisfied	25.0	313
Somewhat dissatisfied	11.4	142
Very dissatisfied	5.8	72
	100.1%	1,251

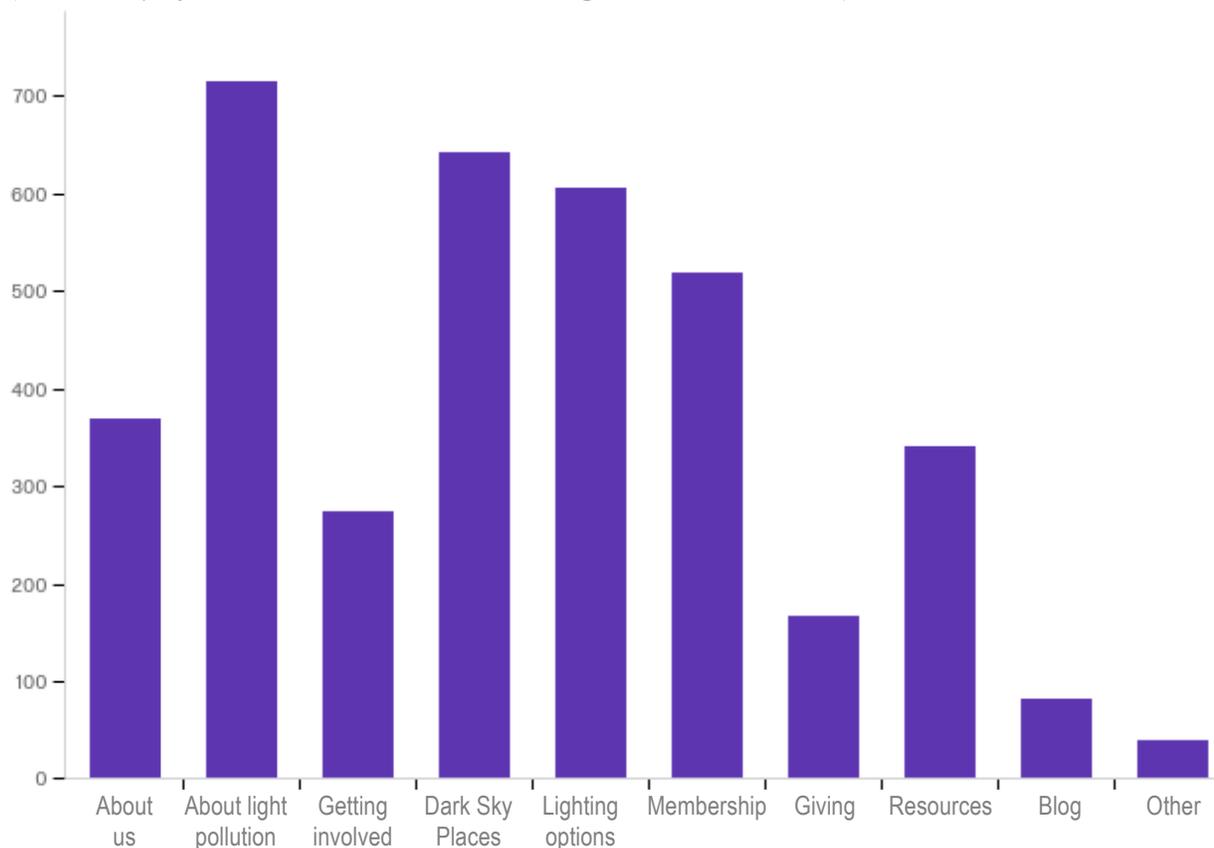
Approximately how many times have you visited IDA's website during 2016?



Visits to website	%	Count
None	19.9	250
1-3 times	42.6	536
4-9 times	23.0	289
10 times or more	14.5	183
Total	100	1,258

Which of the following areas of the website have you visited during 2016? Please select all that apply.

(Asked only of members who indicated having visited the website.)



Website section	%*	Count
About us and our work: our Board, chapters, and programs	37.6	369
About light pollution: its causes, effects, and solutions	72.9	715
Getting involved and fighting light pollution: starting a chapter, planning a lighting ordinance	27.8	273
Dark Sky Places: finding dark places to stargaze	65.3	641
Dark sky friendly lighting: options for your home and business	61.8	606
Membership: started or renewed your membership	52.9	519
Giving to IDA: how you or your business can support IDA	17.0	167
Resources: outreach materials, annual reports, FAQs	34.8	341
Blog: success stories, calls to action, and other news	8.4	82
Other	4.0	39

*Since members could choose more than one answer, this column does not add up to 100

What resources would you like to see added to our website?

210 members typed a response to this question. 36 members stated that they did not know or had no opinion. Another nine members indicated that they have never visited the website.

The most common suggestions and requests included:

- Downloadable resources for outreach/education and instructions for how to be an effective advocate (20 members)
 - Although most members appeared unaware of the resources already available for download, a few members asked for those resources to be updated
- Materials useful in locations outside the United States, including resources in languages other than English; stories and updates from other countries (15)
- More and updated info on recommended lighting fixtures: styles, brands, shields, retrofits, placement, before and after photos, and explanations for why they are dark sky friendly (14)
- Scientific articles and findings (e.g., impacts on wildlife, crime and safety, and human health) (13)
- Stargazing assistance: where to go, where to stay, guided and group tours, observatories open to public (11)
- Ways to find and connect with other members, as well as non-members who appreciate dark skies (10)
- Outreach materials, curriculum, and projects for K-12; kids section on website (8)
- More success stories, case studies of positive change, and members' experiences (7)

Dark Sky-Related Values and Experiences

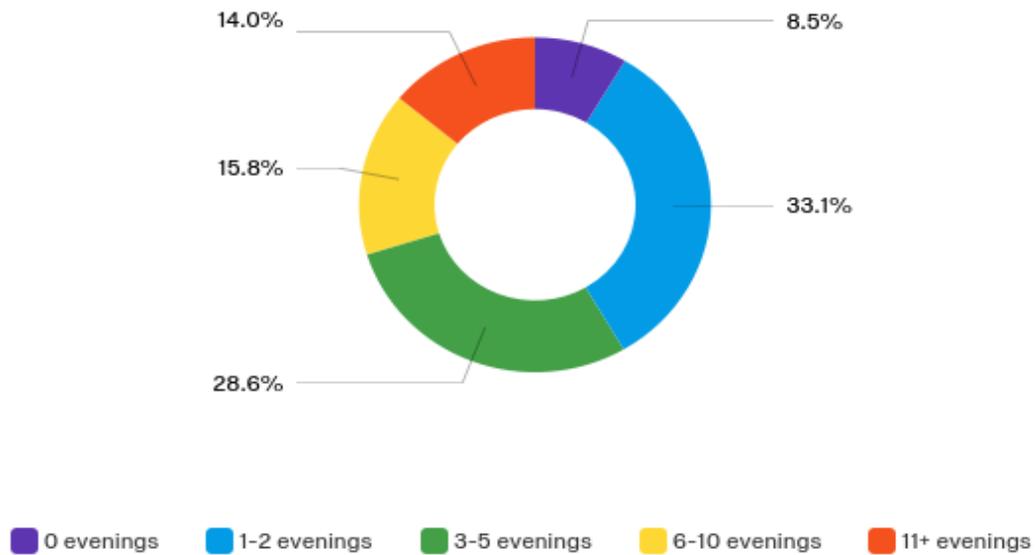
Members' rated benefits of a dark night sky and their stargazing experiences

The following is a list of some benefits of having a dark night sky. Please rate how important each benefit is for you *personally*.

Benefit of a dark night sky	Mean	Standard deviation
Environmental impact of using less energy	8.17	2.16
Financial savings of using less energy	7.03	2.49
Improved human health	7.91	2.31
Improved wildlife and ecosystem health	8.67	1.81
Appreciating nature's beauty	9.21	1.39
Understanding my place in the universe	7.42	2.96
Religious and/or spiritual benefits	3.82	3.63
Stargazing with telescopes or binoculars	8.40	2.41
Stargazing with the unaided eye	9.17	1.61
Other	9.35	1.14

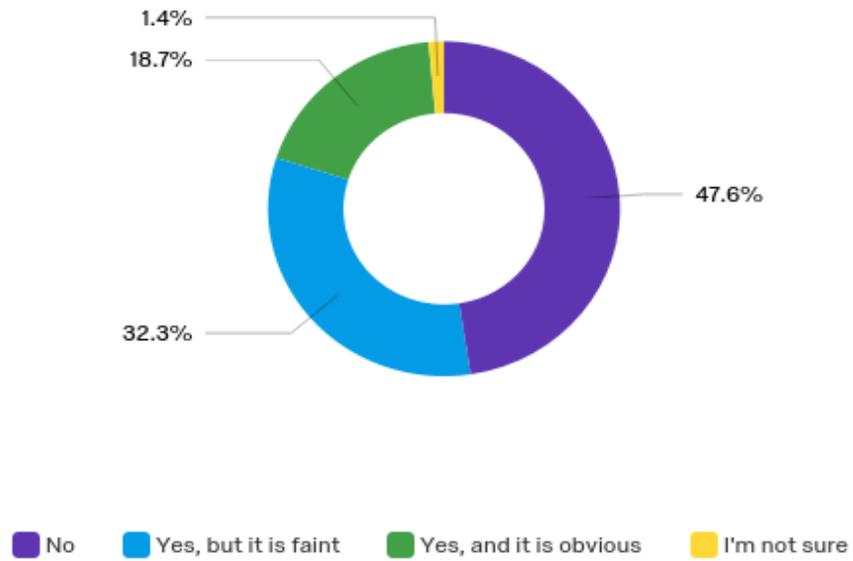
- Only 55 respondents rated all nine of these specific benefits with a 10
- 104 members also wrote in and rated an additional “other” benefit of their choosing. The most common write-in benefits included:
 - Safety (for homes, pedestrians, and drivers) and getting rid of glare (23 members)
 - Astrophotography (9)
 - Improving the character and/or aesthetics of community living (8)
 - Experiencing, enjoying, or otherwise appreciating natural darkness (8)
 - Science education and outreach (7)
 - Slowing down, escaping daily concerns, mental health, and meditation (6)
 - Improved sleep (6)
 - Preserving for future generations (6)
- 12 members indicated having technical difficulty answering this question, but only six of those members did not offer a response to the question. The total number of members who answered this question—just over 1,200—was consistent with the question’s position near the end of the survey (e.g., 1,207 people responded to the question immediately following this one), indicating that the technical problems were not widespread.

During a typical month, how many evenings do you spend time stargazing?



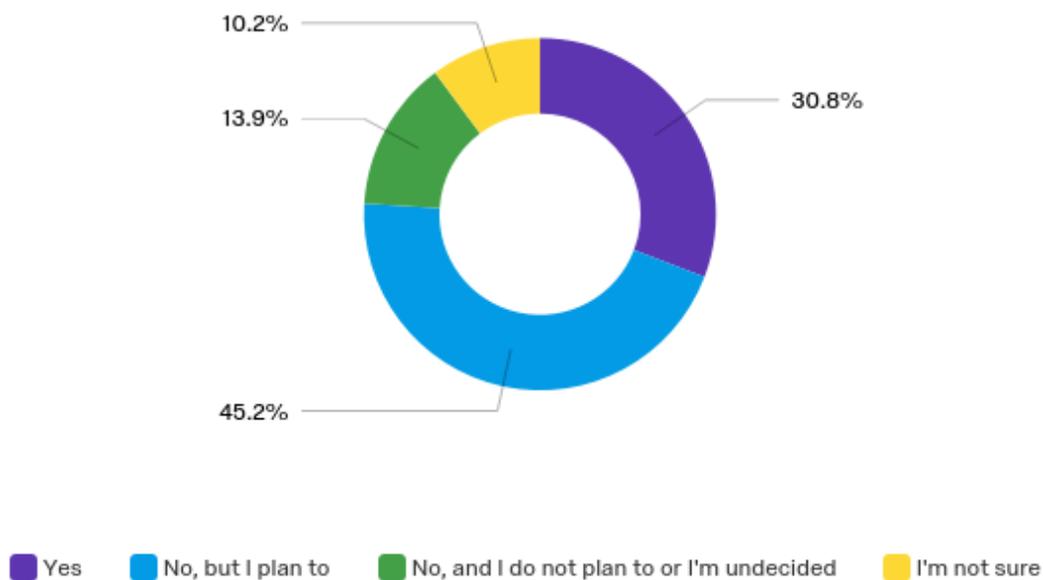
Number of evenings	%	Count
0 evenings	8.5	103
1-2 evenings	33.1	399
3-5 evenings (roughly once per week)	28.6	345
6-10 evenings (roughly twice per week)	15.8	191
11+ evenings	14.0	169
Total	100	1,207

Is the Milky Way visible from your home?



Milky Way visible?	%	Count
No, it is not	47.6	578
Yes, but it is faint	32.3	393
Yes, and it is obvious	18.7	227
I'm not sure	1.4	17
Total	100	1,215

IDA designates areas as International Dark Sky Places through a rigorous application process. Have you visited an IDA International Dark Sky Place?



Visited IDSP?	%	Count
Yes	30.8	373
No, but I plan to	45.2	547
No, and I do not plan to or I'm undecided	13.9	168
I'm not sure*	10.2	123
Total	100.1	1,211

*As I noted in our previous conversations, I worded the responses to this question poorly. Specifically, we cannot be sure whether the members who selected "I'm not sure" meant 1) they did not know if they had visited a park, or 2) they were not sure if they would visit one in the future

Tell us about one of your favorite stargazing experiences. What made the experience significant to you? (If you have not had a significant stargazing experience, please type “N/A”)

847 members responded to this question. 63 responded with “N/A,” and another 15 described why they have not had a significant experience (e.g., “too much light pollution where I live”). Another 29 members simply noted that there are “too many to count” or “all of them are significant” without offering any details.

Due to this question’s position near the end of the survey, many members offered very brief responses. However, some members typed one or more paragraphs in response, and 96 members described two or more experiences. In all, the compiled responses to this question added up to 59 pages of text (12pt font, 1” margins).

The open-ended nature of this question makes it difficult to compare particular responses. (For example, some—but not all—members specified the location of the experience, who they were with, what they saw, how they felt, etc.) However, given the quantity of responses, it is still possible to ascertain some trends and themes.

Location

- Home (106 members)
- Away from home (379)
 - Somewhere local (e.g., a nearby park or open field) (36)
 - Traveling/vacationing (226)
 - Attending a star party or visiting an observatory (51)
 - Working or volunteering at a star party, observatory, park, or campground (66)

Whether local or vacationing, 66 members named an IDA-designated Dark Sky Place as the location of the experience

With other people

Many members indicated they were at a public location, suggesting that their experience involved other people, but only 120 members indicated who they were with:

- Family (66)
- Friends and/or members of their astronomy club (54)

90 members were showing, teaching, or otherwise facilitating the stargazing experience for others.

Use of technology

- Viewed the night sky with the naked eye (405)
- Used telescopes and/or binoculars (213)
 - (Only 81 members were engaging in *both* unaided eye and telescope/binocular observing during this experience)
- Imaging and/or photography (35)

Objects and phenomena seen

- Milky Way (174)
- Meteor/meteor shower (103)
- Galaxy, nebula, or other deep sky object (78)
- Planets (72)
- Constellations (54)
- Comet (42)
- Aurora borealis/australis (39)
- Moon (18)
- Other event/object/phenomenon (36)

Saw something for the first time

- Dark sky and/or the Milky Way (32)
 - Another 12 members specified that it was the first time in a long time
- Specific astronomical object or phenomenon, especially Saturn and the zodiacal light (51)

So dark that...

- Andromeda was visible to the naked eye (16)
- Had difficulty identifying the constellations; felt disoriented or lost in the sky (15)
- Something (other than the moon) cast a shadow (13)

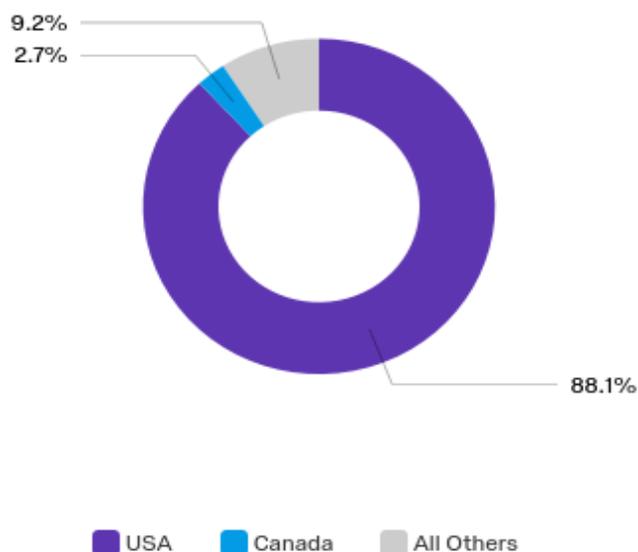
Other trends in the shared stories

- Shared a memory from childhood (76)
- Experience occurred while camping (46)
- Experience involved being in, on, or near water (39)
- Made a comparison between the present-day night sky and what it looked like many years ago (37)

Demographics

Age, gender, employment, race/ethnicity, income, and country of residence

Country of residence

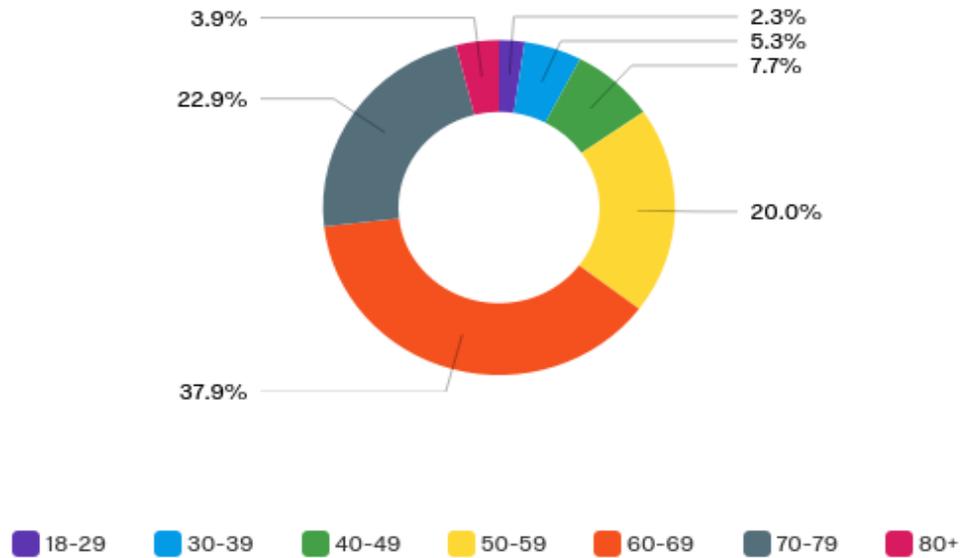


Country of residence	%	Count
United States of America	88.1	1,045
Canada	2.7	32
All other countries	9.2	109
Total	100	1,186

Other than the United States, Canada was the only country of residence for greater than 2% of the respondents.

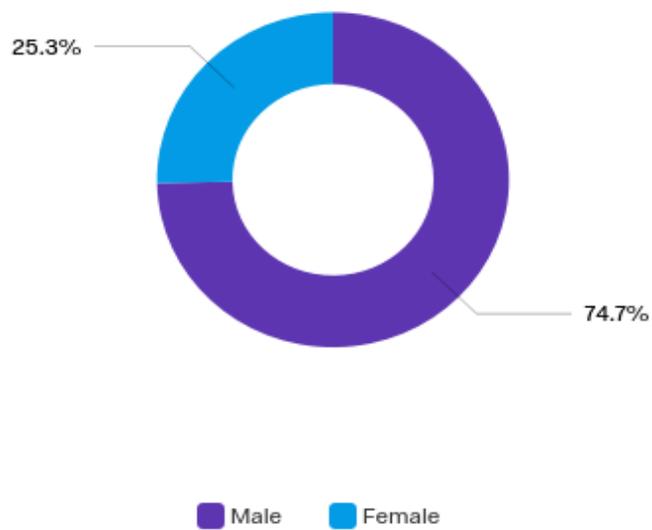
- 16-20 survey respondents: Germany, United Kingdom
- 11-15 respondents: Australia
- 6-10 respondents: France, Mexico
- 1-5 respondents: Afghanistan, Austria, Belgium, Brazil, China, Czech Republic, Ecuador, Finland, Greece, India, Ireland, Italy, Japan, Kuwait, Malaysia, Namibia, Netherlands, New Zealand, Norway, Spain, Sweden, Switzerland, Turkey, Ukraine, United Arab Emirates

Age



Age	%	Count
18-29	2.3	28
30-39	5.3	63
40-49	7.7	92
50-59	20.0	239
60-69	37.9	452
70-79	22.9	273
80+	3.9	47
Total	100	1,194

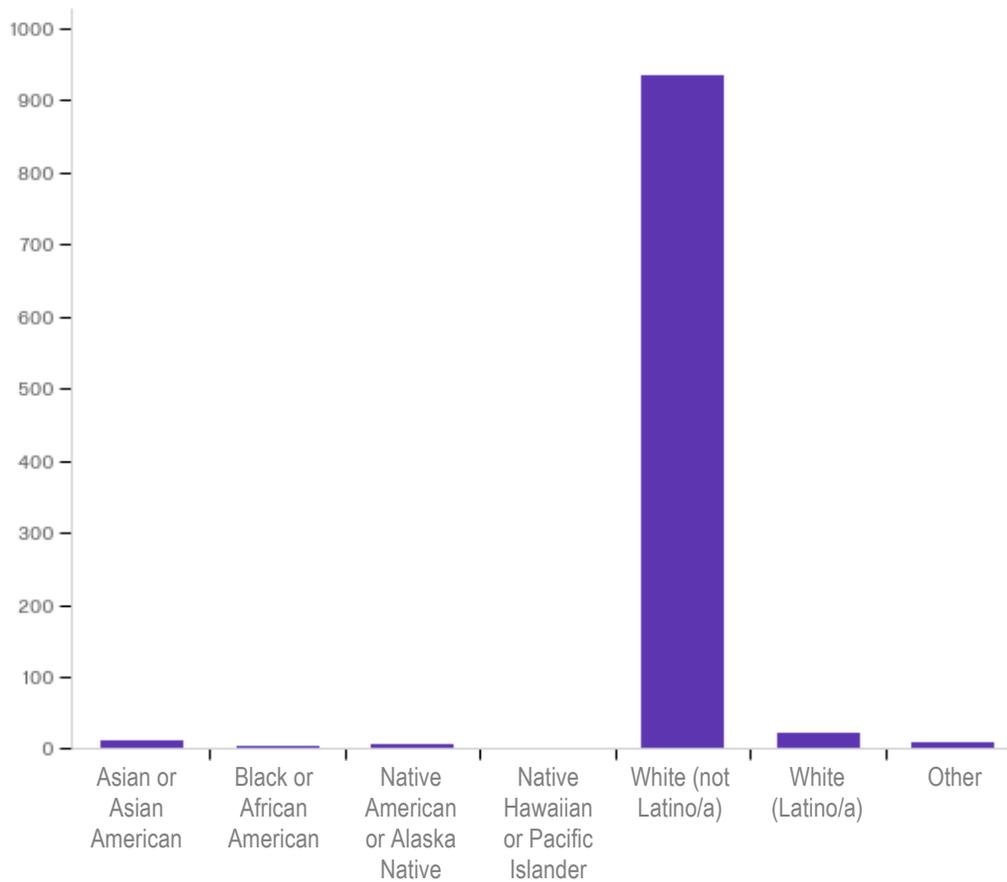
Gender



Gender	%	Count
Male	74.7	888
Female	25.3	301
Total	100	1,189

Race/Ethnicity

(Asked only of members living in the United States)

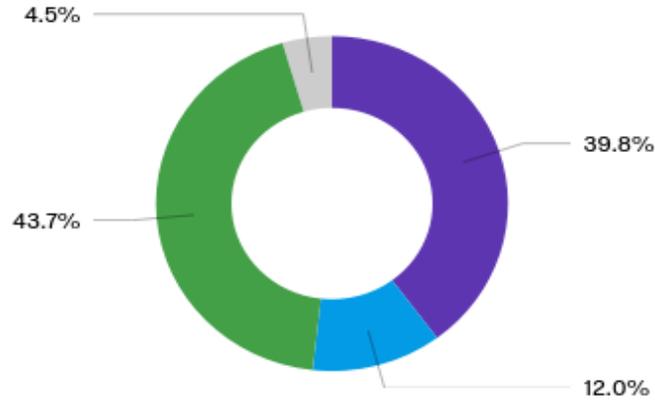


Race/Ethnicity	%*	Count
Asian or Asian American	1.1	11
Black or African American	0.5	5
Native American or Alaska Native	0.7	7
Native Hawaiian or Pacific Islander	0.1	1
White (not Latino/a)	95.7	933
White (Latino/a)	2.3	22
Other	1.0	10

*Since members could choose more than one answer, this column does not add up to 100

- According to the US Census Bureau, approximately 77% of the total US population identified as only White in 2016

Employment status

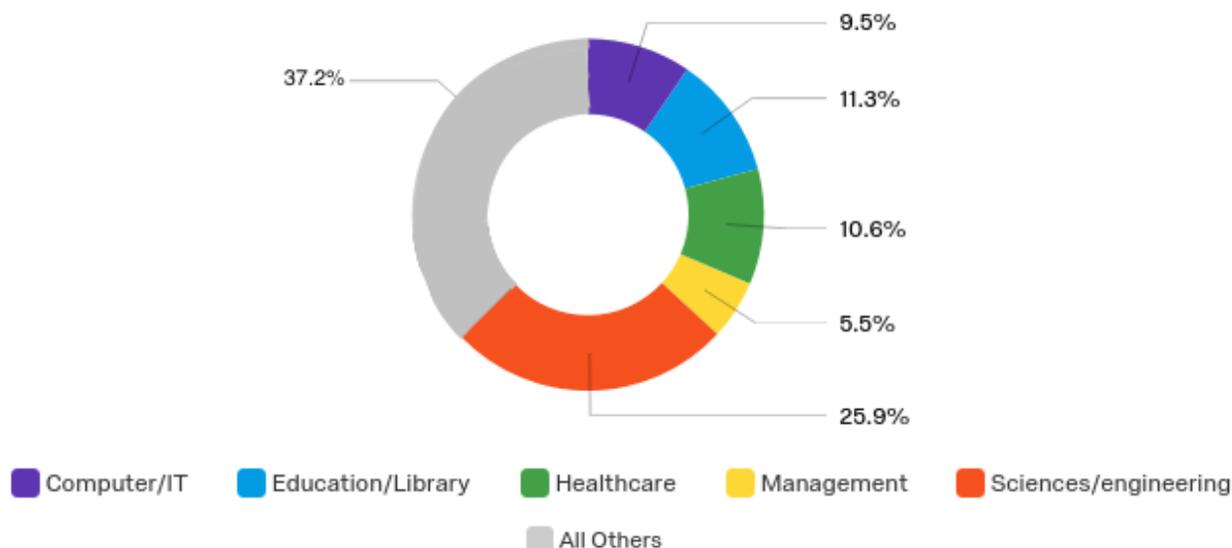


■ Employed, 40+ hours per week
 ■ Employed, 39 or fewer hours per week
 ■ Retired
 ■ All Others

Employment status	%	Count
Employed, 40 or more hours per week	39.8	473
Employed, 39 or fewer hours per week	12.0	142
Retired	43.7	519
Student	1.9	23
Unemployed, seeking paid work	1.4	17
Unemployed, not seeking paid work	1.2	14
Total	100	1,188

Field of employment

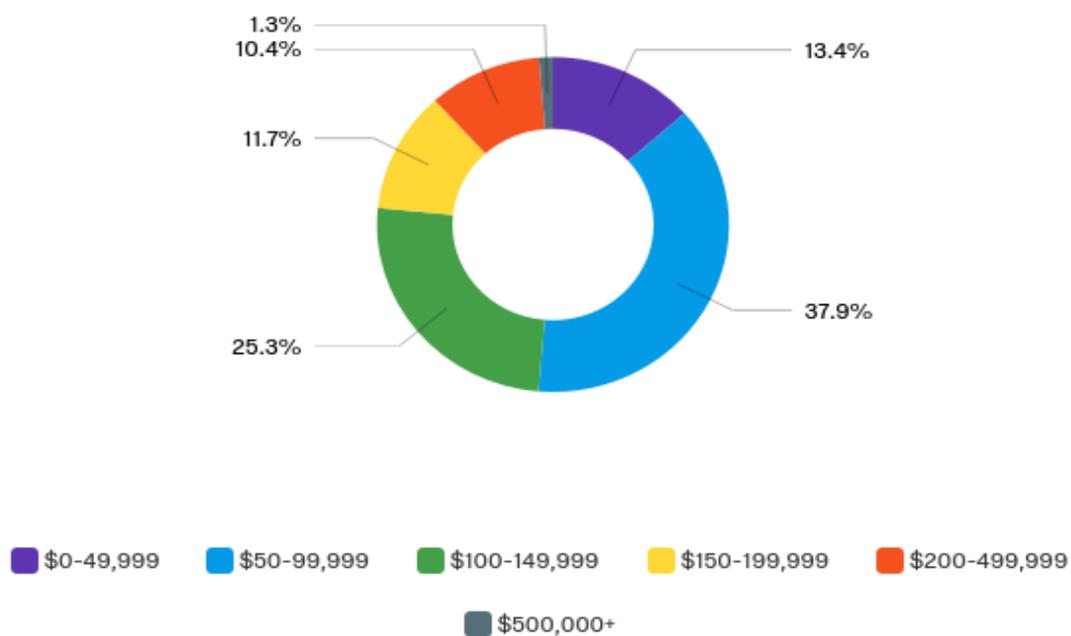
(Asked only of members who reported being employed)



Field of employment	%	Count
Art & design	3.7	21
Business & finance	3.5	20
Community & social service	1.1	6
Computer/IT	9.5	54
Construction/Repair	2.1	12
Education/Library	11.3	64
Entertainer/Performer	0.5	3
Food services	0.7	4
Healthcare	10.6	60
Legal	4.8	27
Management/Administration	5.5	31
Media & communications	1.8	10
Military & protective services	0.9	5
Office/Administrative support	1.6	9
Production/Manufacturing	1.8	10
Sales	2.1	12
Sciences & engineering	25.9	147
Transportation	2.3	13
Other	10.4	59
Total	100.1	567

Annual household income

(Asked only of members living in the United States)



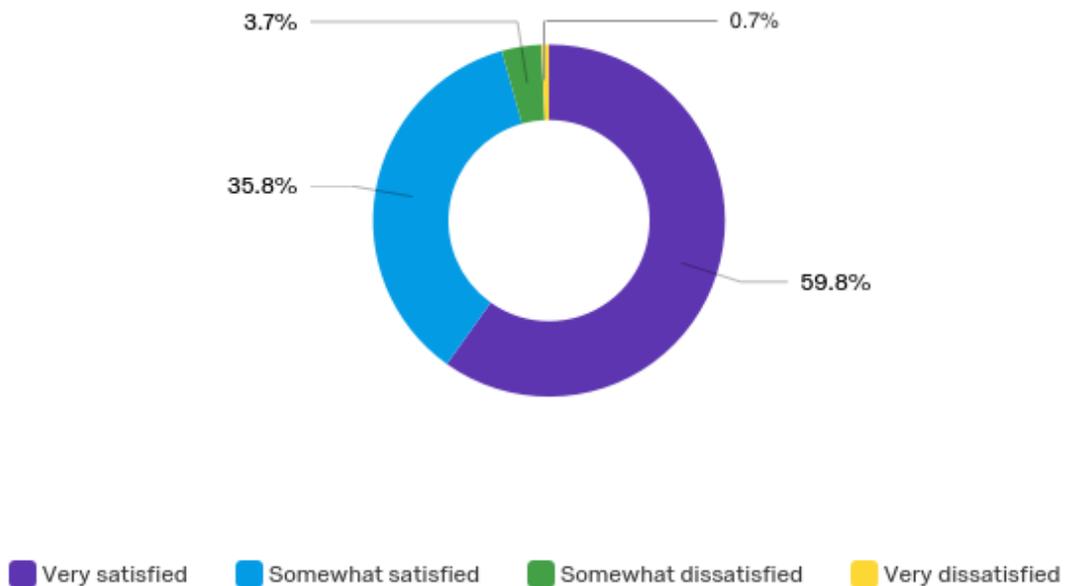
Annual household income	%	Count
\$49,999 or less	13.4	116
\$50,000 - 99,999	37.9	327
\$100,000 - 149,999	25.3	218
\$150,000 - 199,999	11.7	101
\$200,000 - 499,999	10.4	90
\$500,000+	1.3	11
Total	100	863

- According to the US Census Bureau, the median household income in the United States was \$56,516 in 2015

Satisfaction Level and Comments

Members' overall satisfaction with IDA's work and their comments and suggestions

Overall, how satisfied are you with IDA's work toward protecting the night sky?



Overall satisfaction level	%	Count
Very satisfied	59.8	705
Somewhat satisfied	35.8	422
Somewhat dissatisfied	3.7	43
Very dissatisfied	0.7	8
Total	100	1,178

Do you have any other comments or suggestions for us as we continue protecting the night sky?

458 members responded to this open-ended question.

41 members offered gratitude toward IDA (e.g., “thanks for your work”), 80 members offered affirmation (e.g., “you’re doing a great job”), and 84 offered motivation (e.g., “keep it up”).

226 members offered suggestions, many of which echoed sentiments expressed in previous questions on the survey.

- Need to raise more awareness and educate the public; be more visible (57 members)
- Need more work at local levels, such as passing ordinances and influencing street lighting (23)
- Get into mainstream media; need more publicity, press coverage, and/or advertising (21)
- Major progress will require more involvement with politics and legislation (20)
- Need to partner with related or potentially interested groups/organizations (18)

20 members wrote about the transition to LEDs, especially encouraging IDA to engage in more education/outreach about LEDs and/or expressing pessimism about the streetlight transition thus far.

- “I was also hopeful, for a while, that the new LED lighting did indeed offer an opportunity to get ahead of the curve and get better replacement lighting in the system. From my extensive travels in the rural Western US, I have to say that this effort is an abject failure. I see lots of communities that have spent their limited funds on ‘improved’ lighting only to install some of the worst examples of bad lighting I’ve ever seen.”

19 members expressed a desire for IDA to be more aggressive and/or to pursue stronger, more stringent goals.

- “As I see my local sky get ever brighter, I conclude that IDA needs to be far more aggressive in attacking sky-directed light sources operated by people who couldn’t care less about dark skies.”

12 members requested that IDA be less US-focused and/or more involved in specific countries outside of the United States, including offering materials in other languages.

At least ten members expressed frustration and/or disappointment toward IDA after contacting a staff member (via phone, mail, and email) but receiving no response to their inquiry.

Several members used the question as an opportunity to share stories with IDA, including how lighting in their community and/or their night sky has changed over time (14), how they have advocated for dark skies—successful or not (16), and the advocacy they plan/hope to do (11).

A few members offered to help IDA with specific tasks; unfortunately, because the survey was anonymous, it was not possible to know who made the offer unless the member also supplied their name.

Appendix: Summary of Methodology

In fall 2016, IDA sent an email to their 3,587 members¹ inviting them to complete the online survey created using Qualtrics software. Over the next three weeks, these members also received two email reminders encouraging them to complete the survey. IDA mailed a paper survey to the 317 members for whom they did not have an email address. These individuals did not receive a reminder to complete the survey. (Their response rate was nonetheless comparable to the email invitation response rate.) The invitations and reminders produced a 34% response rate with 1,317 members taking the survey.

The survey was anonymous and no identifying information was collected. (The only exceptions were the ~10 members who included their name in one or more of their responses.)

The survey contained 28 fixed choice questions and eight open-ended questions for text responses. Only one question on the online survey was forced choice such that members had to answer it in order to proceed. (This question was about chapter participation and was required because it determined which question the member would be asked next.) All other questions were optional, though they were not explicitly labeled as such. Many members chose not to answer one or more questions on the survey.

Given the length of the survey, over 200 members began taking the survey but did not finish. Unfinished surveys in which the member completed at least ten questions (122 surveys) were included in this analysis. Data from the other unfinished surveys was discarded.

The survey was only offered in English, potentially limiting the number of respondents and/or skewing the overall respondent base. However, given that nearly all of IDA's communications and materials are currently offered only in English, it is unlikely that a significant number of IDA members cannot read English.

In the text responses selected for use in this summary report, the report writer edited members' spelling and grammar mistakes. No other changes were made to members' own words.

¹ This number includes current members, as well as those persons whose membership had lapsed within the last year. It does not, however, include persons who donated to IDA in the last year but did not submit the membership form.