	Appendix # 2
American Radio Relay League Proposed 2024 Departmental Plans	
Revised 12/12/2023	
BOARD CONFIDENTIAL	

American Radio Relay League 2024 Department Plans

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Membership and Member Services Membership Manager

Membership

Membership remained flat during 2023. The organization struggled to implement successful strategies to regain lapsed members to grow membership. As is true with all dues increases, the 2024 ARRL dues increase will result in a decline in membership. The decline projected in the 2024 Plan, for the first time, not only includes a decline as a result of a dues increase, but also an inherent decline due to the aging population of members. To be conservative, what is not included is any growth for strategic initiatives that the Strategic Working Group will put forth.

2024 Membership Forecast

Year end 2023 (projected)	150,000
Net Loss (4.8%)	(7,200)
Year end 2024 (projected)	<u>142,800</u>

2025 Membership Forecast

Year end 2024 (projected)	142,674
Net Loss (4.0%)	(5,712)
Year end 2025 (projected)	<u>137,088</u>

Strategies

With a change in Membership Management and the required updating of marketing materials with the new dues structure, the opportunity this presents to revamp all forms of communications with new hams, members, lapsed members and never members will be embraced.

- New baseline communications are already being developed with the goal of A-B testing continually throughout the year. This type of message testing re-initiated with a 2023 year-end A-B mailing to lapsed members. To be successful, further refining membership appeals and segmenting prospective membership solicitations based on new licensees, upgrade licensees, lapsed members, renewing members, operating interest(s), purchasing and transaction history, etc. will need to be utilized.
- Promoting membership benefits and programs, such as the Learning Center, new EmComm courses, Logbook of the World (LoTW) and current advocacy efforts will need to play a role in growing and retaining the members.
- In an effort to promote growth internationally, in early 2024, an email solicitation to European LoTW users will be created with a focus on ARRL's role in promoting and

protecting Amateur Radio for the benefit of all hams, while simultaneously promoting benefits and services of particular interest to non-US hams such as LoTW.

Some of the tools that the Membership Department will leverage to support membership initiatives include:

<u>New Ham and Upgrade Mailings</u>: Radio amateurs who have earned new or recently upgraded licenses are a strong source of ongoing membership prospecting. The first new ham mailing currently congratulates and invites the new licensee to complete a short survey and receive a token gift (band chart and HAM sticker) in exchange for their email address. Next, they receive a series of communications promoting ARRL's benefits and encouraging them to join.

<u>Retention Activities</u>: 90-120 days prior to membership expiration retention activities begin with emails encouraging members to renew online. If members still do not renew, the member receives a combination of renewal reminders both electronically and in hardcopy format.

<u>Promote auto-renewal</u>: Promotion of this process has not yet been implemented but is planned for 2024. If this option is embraced by members, it will result in the reduction of paper mailings.

<u>Direct Mail</u>: In 2024, very deliberate and controlled direct mail pieces will be tested, evaluated for success, and continually updated with various test messages, materials, and offers.

<u>Website and Email</u>: The ARRL website and our databases of email addresses are regular sources for membership prospecting. Refining the messaging and incentives for maximum engagement with targeted groups will be a continual process.

<u>Listen and Be Creative</u>: Continuous feedback from our members and non-members is crucial to the success of the organization. This feedback will be used to refine and develop new strategies, benefits and solve member discontentment.

<u>Assessing workflows</u>: The integration of Informz with Personify, will streamline some communications processes, and enhance communication campaigns by automating them.

<u>Field Recruitment</u>: We have a collection of high-quality collateral and display items to support volunteers and staff involved with field-based membership recruitment and the promotion of Amateur Radio. Some of these items are regularly customized for specific events.

<u>Exhibits</u>: In 2024, we will support an organizational presence at the 2024 ARRL National Convention held at the Dayton Hamvention®.

In addition to organizing ARRL exhibits and activities for Hamvention®, support will be provided for smaller exhibits at a handful of the largest Amateur Radio conventions held annually. These events include participation from many members, prospective members, advertisers, and business partners.

- Orlando Hamcation®
- SEA-PAC—Seaside, Oregon
- International Exhibition for Radio Amateurs—Germany
- Huntsville Hamfest—Huntsville, Alabama
- Northeast HamXposition—Marlborough, Massachusetts
- Pacificon—San Ramon, California

Membership and Member Services also regularly support member-volunteers who organize exhibits outside of ham radio events, promoting ham radio to like-minded interest groups.

Affinity Benefit Programs

Support continues for the affinity benefit programs:

- Maglite
- ARRL Equipment Insurance Program
- ARRL Club Insurance Program

Efforts to investigate and implement new benefits for membership are ongoing. Beneficial affinity programs are difficult for ARRL to obtain, as program administrators either are not interested in working with ARRL due to our size or require a promotional program commitment that hinders other promotions and activities of the organization.

Member Services

Mission and Goals

Our mission is to serve members and customers through effective communications and the efficient centralized administration of application processing, order processing, and circulation. Excellence in service is the #1 priority. Functions of these departments include the following:

- Membership and order fulfillment
- Support for events and exhibits
- HQ volunteer program

Member Services

The Member Services team supports membership application processing, renewal, and retention strategies executed in close coordination with the Membership Manager, circulation (*QST*, *OTA*, *NCJ* and *QEX*), publication, and product sales. This area also manages fulfillment of exhibit and event collateral (forms, brochures and handouts, display materials, and other media) and in-house inventory fulfillment and distribution (including membership signing premiums). In addition, Member Services provides "help desk" support for ARRL's digital magazines, ARRL website user accounts, and member login concerns.

The staff supporting these areas is cross trained across all areas to support the efficient workflow. Each Member Services handles approximately 900 telephone calls per month.

The Member Services team also supports and administers numerous activities including updating the association management software with email addresses, birth dates, e-subscription preferences, merging duplicate web accounts, fulfilling supplemental copies of *QST* for new members, and annotating records with member comments.

QST Circulation

With the decoupling of print *QST* from term membership and the dues increase, the volume of printed *QST* is expected to decline significantly. Print *QST* circulation for September 2023 was 114,500 while the projections for 2024 average in the 50,000 per month range.

The magazine will continue to be fulfilled to most domestic members via a "co-mail" strategy. Co-mailing ensures the greatest savings (postage and handling) with the best delivery times. *QST* forwarding expenses will decrease along with the printing expenses.

On the Air Circulation (OTA)

Prior to January 1, 2024 members were given an option of printed *QST* or *OTA*. Based on the decoupling of print from membership, *OTA* print volume is also expected to drop. Along with the decoupling, ARRL has lowered the subscription price from \$40 to \$25. For those who were paying the higher rate for the add-on, the price reduction may keep them receiving the print version. Print circulation for the Sept/Oct 2023 issue was 19,500. Projections for 2024 are in the 17,500 range.

OTA will also continue to be fulfilled via co-mail.

QEX and NCJ Circulation

The current print run for the Sept/Oct 2023 issues of QEX and NCJ were 3,900 and 1,850, respectively. Paid subscription volume for QEX and NCJ are expected to continue to decline. An estimated decrease of 15% was used for the 2024 Plan.

Publication and Product Sales

Jackie Ferreira, Marketing Manager

The publication and product sales forecast for 2024 is \$2,987,806.

Publication and Product Sales Forecast by Category

	2022 Actual	2023	2024 Plan
		Projection	
CLASS 01 HANDBOOKS	\$688,186	\$599,450	\$501,807
CLASS 02 REPEATER DIRECTORY	\$80,185	\$102,325	\$104,936
CLASS 03 BEGINNER TRAINING PUBS	\$499,004	\$546,595	\$546,620
CLASS 04 UPGRADE LICENSING PUBS	\$328,519	\$430,418	\$421,958
CLASS 05 OTHER ARRL BOOKS	\$453,535	\$696,054	\$724,642
CLASS 07 NON-ARRL BOOKS	\$188,529	\$180,000	\$2,238
CLASS 08 RSGB BOOKS	\$6,509	\$6,000	\$11,641
NEW KITS AND EQUIPMENT			\$262,530
CLASS 12 ROYALTY BOOKS	\$116,772	\$181,000	\$120,434
CLASS 32 MEMBERSHIP SUPPLIES	\$227,025	\$260,000	\$230,000
e-Book Royalties	\$45,348	\$60,000	\$61,000
Publication and Product Totals:	<u>\$2,633,612</u>	<u>\$3,061,842</u>	<u>\$2,987,806</u>

Kindle e-Book Royalties

Most new ARRL publications are produced in both print and Kindle format — Amazon's e-book platform. There are 25 ARRL titles in the Kindle marketplace. Please note the total number of digital titles includes the *ARRL Handbook*, *Antenna Book*, and *Operating Manual* broken down into six, four, and two volumes, respectively.

Direct vs. Dealer Sales

Jan 2023 to Sep 2023

- 51% to members and individual customers
- 49% to dealers and wholesalers

With consistency, the top 10 publications and product lines produce the majority of all sale commerce. For the last twelve months, 79% of the sales commerce is attributed to the following top ten publication titles and merchandise.

Top 10 Grossing Publication Titles and Product Lines

October 2022 to September 2023

Product Description	QTY	Gross Sales	Net Sales
ARRL Handbook	15,265	\$1,007,894	\$686,424
ARRL Ham Radio License Manual	23,588	\$539,525	\$452,654
ARRL General Class License Manual	10,358	\$249,245	\$199,594
ARRL Extra Class License Manual	5,918	\$141,413	\$88,415
End-Fed Half-Wave Antenna Kit	1,441	\$108,070	\$42,610
ARRL Antenna Book	2,929	\$111,198	\$70,443
ARRL Repeater Directory	4,938	\$70,583	\$35,652
ARRL Field Day Merchandise 2023 (t-shirts, hats,	6,919	\$58,051	\$35,989
Here to There: Radio Wave Propagation	2,924	\$52,929	\$40,030
ARRL Operating Manual	1,747	\$32,379	\$24,056
TOTAL - Top 10		\$2,371,287	\$1,675,867
TOTAL – All Products		\$3,016,444	\$2,152,808
Top 10 as a percentage of total sales		79%	78%

New Publications and Products

Our most successful sales strategy includes the regular introduction of new products, particularly new publications, and new editions. The following are in the plan for 2024.

- 2024 Repeater Directory
- Luxury POTA Logbook
- Best of Arduino
- Extra Class License Manual
- Extra Class Q&A
- Hints and Hacks
- Practical EmComm Project Book
- Satellite Book
- Handbook 101
- 2023 Periodicals DVD
- 2025 ARRL Amateur Radio Calendar
- 10/6 Meter Beam and Multi-Band Vertical

<u>Goals</u>

- Meet or exceed sales targets.
- Improve decision-making and increase profit margins by preparing profit & loss forecasts for new publications and products.

- Improve marketing across sales channels through greater analysis of sales results, better use of data, and more personalization.
- Dramatically improve performance on Amazon.
- Leverage current e-store capabilities, and plan for future of direct to member retail experience.

Assumptions and Risks

- 1) When a new license manual is introduced because of a new question pool, it generates a surge of interest from individuals purchasing study materials for the new exam, and from wholesalers seeking to restock with new editions. In 2024, a new Amateur Extra class question pool will prompt new editions of *The ARRL Extra Class License Manual* and *ARRL's Extra Q&A* in May.
- 2) We expect to continue to increase the sales of ARRL license manuals and other best-selling publications purchased by our top wholesaler Amazon. Our strategy includes enhancing our retail presence, sponsored ads, advertising brand campaigns, and building an ARRL store on their website. We continue to benefit from the expertise of an Amazon account manager (consultant) as we scale up our brand presence and grow sales.
- 3) A new edition of *The ARRL Handbook* will be released in 2024. This will be the first new edition after the 100th anniversary edition was introduced in 2022. Historically, the number of units sold the year following a major update is lower than the previous year.
- 4) A major revision of *The ARRL Antenna Book*, the 25th edition, will be introduced in the fourth quarter of 2023. The edition will be closely marketed with *Handbook* 100, drawing attention for, and sales of, both books into 2024. Customers who did not purchase the *Handbook* originally may be incented to purchase both popular book titles together.
- 5) The forecast includes sales of two new antenna kits a 10/6-meter beam, and a multi-band vertical antenna. Both products are in development with manufacturing partners. Like the successful EFHW antenna kit we have carried for 2 years, the new antennas will serve as a basis for creating content (written and video) and support our strategy to engage new and inexperienced hams moving them to be active or more active.
- 6) Book delays, paper shortages, and printer schedules add some uncertainty to sales forecasting. The forecast also assumes new titles will help drive interest for older titles.

Advertising Sales

Janet Rocco, Advertising Sales Manager

The purpose of ARRL Advertising is to connect members with reputable suppliers of Amateur Radio equipment and services. A variety of advertising products are available across ARRL membership benefits including ads placed in ARRL's magazines, website, podcasts, and to support services like Logbook of The World, contests, and award programs. From time to time, unique ad placements are offered such as those associated with reaching new licensees, targeted advertising in books, and flyers placed in outgoing sales orders.

It is important to work with advertisers to help them build brand loyalty, and to sell their products and services. Advertisers report that an important reason they choose to advertise with ARRL is to support our efforts to promote and protect Amateur Radio.

2024 Advertising Sales Goals

Meet or exceed advertising sales targets.

<u>Increase attention to, and sales of, digital advertising.</u> As more members migrate to the digital editions of magazines, advertisers will be encouraged to make more effective use of digital advertising opportunities. The ads themselves can include animation/motion, embedded or linked videos, and pop-out content. A focus will be to lead advertisers to creating multi-channel campaigns, linking their ARRL ads with microsites, social media engagement, and timely offers (that can change daily or weekly!) is a priority.

<u>Develop more advertising around content in NCJ and QEX.</u> Increase the amount of advertising in NCJ and QEX by connecting potential advertisers to issues that include articles, topics, and themes related to their products.

<u>Improve decision-making and increase profit margins by preparing profit and loss forecasts for</u> new ad products.

Continue to engage business partners in conversations that potentially can assist us in discovering new ways of advertising that will be beneficial to their bottom line, while increasing ad sales.

Current Advertising Products

- *QST* includes covers, interior ads, Field Day supplement sponsorship in June, Contest supplement sponsorship in November.
- On the Air includes back inside cover, back cover, and a commitment of interior pages for ads.
- *NCJ* includes covers and interior ads.
- *QEX* includes covers and interior ads.
- arrl.org website ads on home page and all secondary pages.
- LoTW website sponsorship and ads on pages after log-on page.
- E-newsletters ads in *The ARRL Letter*, *Contest Update*, *ARES Letter*, and *Club News*.
- On the Air podcast sponsorship.

- Flyer in outgoing retail orders.
- Auction sponsorship.
- Estate Planning Workbook sponsorship.
- Code Proficiency Certificate sponsorship.
- November Sweepstakes plaque sponsorship.
- ARRL Events app advertising in our mobile app used at Orlando HamCation and Dayton Hamvention.
- Publications advertising The Parks on the Air Book, ARRL Repeater Directory, Handbook, License Manuals, and Antenna Book
- *QST* Classified ads

New Advertising Products for 2024

- Digital Holiday Gift Guide
- Bulk emailed advertising with show specials for Orlando HamCation and Dayton Hamvention.
- Learning Center paths sponsorship (targeted advertising).
- ARRL bags sponsorship. Bags distributed by ARRL at major conventions.
- Companies whose products align with Amateur Radio (new advertising prospects).

Product Development and Innovation Bob Inderbitzen, Director of Marketing and Innovation

Overview

Fostering a culture of innovation requires a Product Development function that ensures structure, process, and management where innovation can flourish. For ARRL, "products" include member and mission-related benefits, services, published content, programs, and experiences. The mission of Product Development is to create, through effort and experimentation, products that have value for our members and other stakeholders and are relevant and attract members. This is accomplished by enabling and developing ideas, examining, and improving the effectiveness of existing programs, and most importantly -- cultivating collaboration; between staff, business units, and with member-volunteers and other stakeholders. Creating value relies on a regular source of ideas from everyone. Small, cross-functional agile teams develop worthy ideas, and the Senior Management Committee provides additional review and oversight.

2024 Product Development Goals

Product Development provides ongoing management, development, and contribution to a variety of products, services, programs, projects, and partnerships. The following is a summary of some of the initiatives already underway. With an iterative and agile product development culture, this list is intended as a snapshot of current and foreseen interactions. This work is subject to rapid and flexible response to changes made throughout new product discovery and planning.

ARRL Ideation (ongoing)

Ideas are regularly received, acknowledged, and shared for additional consideration and possible development. A goal is to develop a process for categorizing and organizing them, determining the feasibility of each idea, prioritizing them based on metrics (such as impact, cost, time, ARRL resources, etc.), and then planning and executing them.

New Products (ongoing)

Books

A cross-functional assortment planning team meets monthly to evaluate core titles, to consider and evaluate new publication opportunities, and to discontinue or sunset titles. Of particular interest in the next year is the introduction of a new edition *Handbook* (101st edition; October 2024), titles covering technology and operating that move members to developing stations and new skills, and adding works that bolster our brands and themes including On the Air and Cycle 25.

Our attention also includes business development opportunities involving publication asset acquisitions intended to grow our product offerings and revenues in the areas of licensing and training.

• Kits and Antennas

Similar to the presently offered end-fed half-wave antenna kit, development is currently taking place for additional kits and antenna products to support the goal to engage members more deeply in project building, experimentation, and experiences that lead them to being (more) radio-active. These product offerings are also a basis for additional content creation including magazine articles, videos, and hands-on experiences at hamfests and club meetings. We are presently working with two manufacturers to help introduce two antenna products in 2024.

• Other Products

We want to have a good merchandise mix that will interest, and even inspire, members. The introduction of certain products may also contribute to member loyalty and help us respond to current trends. The following are areas of further product development for 2024:

- o ARRL-branded merchandise and apparel (including personalized items).
- o ARRL-branded key and/or keyer.
- o Software and apps.
- o Membership incentives for new licensees (for example, a call sign badge for new licensees, tied to our On the Air brand).
- o ARRL and Amateur Radio recruitment/outreach materials (display and exhibit items, and handouts).

Partnerships (ongoing)

ARRL has many partnerships that help us achieve our mission. Partner relationships increase the visibility of ARRL and Amateur Radio while creating mutually beneficial opportunities. Some examples include the following:

- <u>HamSci</u>. We have partnered with HamSci to help promote participation in the upcoming solar eclipse projects (2023 and 2024). Opportunities to help support this community of Amateur Radio operators and scientists helps ensure we connect members with interesting topics and activities.
- <u>Courage Kenny Handiham Program</u>. Our partnership with Handiham supports our endeavor to improve access to our content by members and other radio amateurs with disabilities.
- MAGLITE. Since 2021, ARRL and Mag Instrument, the manufacturer of the MAGLITE® Flashlight, have had a partnership that helps ARRL introduce Amateur Radio to more people through MAGLITE's highly visible consumer selling channels. ARRL shares this recognition with MAGLITE's other well-known partnerships including the National Association for Search and Rescue, St Jude Children's Research Hospital®, and American Veterans Center. ARRL members are offered a 20% discount on Maglite products.

Expanding Digital Media

ARRL's ongoing digital transformation and recent move to separate printed magazines from membership require further attention to attract and retain members through our publication of information and content in the digital realm. Additionally, as ARRL digital publishing competency increases, the likelihood of prospective members to find the information they need to expand their knowledge of radio technology and radio communications from ARRL will grow. Most new ARRL books already follow parallel print-and-digital publishing paths. Additional areas of development include further expansion of digital media using ARRL's vast library of previously published content, more mobile apps, and use of mobile optimized platforms for content delivery such as a blogging platform.

Portfolio Analysis

As we set our sights on trying new things, it is important to identify opportunities to shed legacy programs, services, and products that no longer provide (enough) value to members and/or contribute to the organization's strategic needs. This will require developing efficient methodologies for evaluating products on an ongoing basis. Ultimately, discontinuing some products will free up resources, including staff, creating opportunities to support new products. There are many examples of existing products that have outlived their usefulness, and which can be discontinued or sunset:

- Books with few sales.
- Programs with disappointing participation.
- Services with weak penetration.
- Benefits that do not have strategic underpinnings.

Events and Exhibits

In 2024, ARRL will support exhibits and related participation at the following major Amateur Radio events. These events are among the largest and best-organized conventions, and attract participation from the leading equipment manufacturers and dealers (ARRL advertisers):

- Orlando HamCation® (February) and featuring the ARRL Events App
- Dayton Hamvention (May; National Convention in 2024) and featuring the ARRL Events App
- SEA-PAC (June)
- International Exhibition of Radio Amateurs, Germany (June)
- Huntsville Hamfest (August; National Convention in 2026)
- Northeast HamXpostion (September)
- Pacificon (October)

In 2024, we will focus on the following key areas of engagement at major conventions:

<u>ARRL Events app.</u> The mobile app will be used again at Orlando HamCation and Dayton Hamvention to identify members and non-members and engage the same.

<u>Youth/student engagement.</u> Participation at conventions includes opportunities to spotlight ARRL resources for education/STEM outreach, and to engage students and educators.

<u>ARRL</u> digital content. Increasing promotion and support of members accessing ARRL digital content including ARRL's magazines, e-newsletters, Learning Center, and YouTube videos.

<u>Expand international membership.</u> As part of other efforts to promote and grow international membership, opportunities like the International Exhibition in Germany will be used to garner greater attention for ARRL's role in promoting and protecting Amateur Radio for the benefit of all hams, while leveraging benefits and services of particular interest to non-US hams such as LoTW, and the ARRL Awards program.

<u>Strengthening Hamfests and Conventions.</u> ARRL will leverage the experience and relationships with the largest, most successful hamfests and conventions to help support budding and struggling events. Examples include networking (via online meetings) convention and hamfest leaders, and publishing articles with best practices. The marketing staff is also using direct-to-member (and lapsed member) targeted emails to help promote Division-level conventions.

Special Projects

2025 ARRL Colleges On the Air. An operating event to help spotlight our vibrant ARRL Collegiate Amateur Radio Community is in the planning stages. The event will run for two months in 2025 and is being organized as on-air event that will attract the participation of active college radio clubs during their 2024/2025 school year. Colleges On the Air will run in a similar fashion to other previously organized operating events. Activated stations (chased stations) will include college- and university-recognized campus radio clubs or stations, and log handling will be driven exclusively by QSOs uploaded to Logbook of The World (LoTW).

Strategic Planning. Work will continue with the Strategic Planning Working Group to develop a new strategic plan.

ARRL Collegiate Amateur Radio Program

The ARRL Collegiate Amateur Radio Program is sponsored in part by the W1YSM Snyder Family Collegiate & ARRL Affiliated Club Endowment Fund, first established in 2017. The program helps network college radio clubs and explores opportunities to bolster student interest in radio communications for practical experience and career connections. Bob Inderbitzen, NQ1R, and Steve Goodgame, K5ATA, are the staff liaison with additional program support coming from member-volunteers Andy Milluzzi, KK4LWR, and Tony Milluzzi, KD8RTT.

Regular areas of interface include monthly web meetings and an ARRL Discord group (group-chatting platform) with participation from dozens of active or budding ham radio programs at colleges. ARRL-sponsored collegiate exhibits and forums have been at Dayton Hamvention, Orlando HamCation, and other major conventions, increasing the visibility of young hams. The Milluzzi's organize the annual Collegiate QSO Party (October), for which ARRL provides editorial support and donates winner plaques (funded by the program's endowment). Throughout

2023, our interface with college radio clubs contributed a regular source of content for ARRL publishing outlets including *On the Air* magazine, the ARRL Calendar, our social media channels and e-newsletters, and the 2022 Annual Report.

Other parallel activities are being considered to further engage collegiate ham radio including a project-building competition, a student competition (individual challenge), and an ARRL student-membership booster.

Publications & Editorial Becky Schoenfeld, Director of Publications & Editorial

Personnel

It's important to remain aware that the organization has a growing need for content across an increasing number of platforms. While there are no new staff positions planned for 2024, the department would benefit from having a dedicated Technical Editor on staff again. After the most recent in-house Technical Editor (the inimitable Joel Hallas, W1ZR [SK]) retired and a lengthy search for a replacement yielded no suitable candidates the department moved to a consulting model. With the desire to bring these skills back in-house, a search will take place to find the right candidate. Should the right candidate be found, there will be a decrease in production costs to offset the salary of a new hire.

ARRL Magazines and ARRL's Ongoing Digital Transformation

The 2024 budget for the printing of magazines, particularly *QST* and *On the Air*, reflects the estimated reduced print quantities provided based on assumptions used across the organization to model the new ARRL membership model that takes effect January 1, 2024. As 2024 progresses, adjustments/reforecast to print costs may have to be made based on member behavior.

In light of the new membership model, there's a need to drive members to the digital edition of our magazines. One tactic Publications & Editorial is using to effect this is increasing the amount of digital-only content that is included in each issue. We've begun this with *QST* already and will fine-tune the types of content we include as feedback comes in about the published offerings. Some of this content is created in-house, and some is created by freelancers. The latter will need to be compensated, so we may see an increase in contractor payments in 2024 if the use of contractors is significant.

It must be said that the process of working on this endeavor with in-house content creators is off to an excellent start. Our colleagues in other departments (PR, Education, the Lab, Emergency Preparedness, and others) have brought good ideas to the table, and have executed them well, adding value to the digital edition of *QST*. Working with them has also been beneficial for the newer Publications staff members. They're learning more about ham radio, other departments in the organization, and collaboration.

2024 Book and Software Projects

Title	Author	To Press
Luxury POTA Logbook	N/A	01/08/2024
Best of Arduino	Glenn Popiel	02/01/2024
Extra Class License Manual	TBD	03/01/2024
Extra Class Q and A	TBD	03/08/2024
Lightning Protection	Ron Block	03/01/2024
RFI Book	Steve Anderson	03/01/2024
The Best of On The Air	Multiple	03/01/2024
Hints and Hacks	Multiple	04/05/2024
Practical EmComm Project Book	Josh Johnston, et al	05/03/2024
2023 Annual Report	Publications	06/01/2024
2025 Calendar	Publications	07/01/2024
The ARRL Handbook, 101st ed.	TBD, et al	09/01/2024
2025 Repeater Directory	RFinder	11/01/2024
Periodicals DVD/download	Publications	11/01/2024

Development

Kevin Beal, Director of Development

In 2023 the Development Office underwent a significant staff change with a hiring of a director in February, a new Development Operations Manager in June, and a new Development Associate in July which filled a vacancy following a staff retirement earlier in the year. New in 2023 was the launch of the ARRL Estate Planning Workbook at Dayton Hamvention in May followed by an informational email in August. Both proved successful, with multiple requests for additional Workbook copies as well as invitations to present the Workbook at local club meetings. In 2024, the Education and Technology Fund will be a priority as ARRL positions itself as a leader in STEM education.

Goals for the Development Office in 2024 will be:

- Establishing and formalizing the major gifts pipeline
- Implementing a donor cultivation program for planned gifts and major gifts
- Curating custom events for major gifts prospects
- Repositioning Diamond Club as the primary philanthropic fund the future of Amateur Radio

The Development Office is creating a trackable and measurable major donor pipeline in Personify utilizing moves management. Moves Management is a major donor cultivation and lifecycle process used in best-in-class fundraising programs. The process creates a pathway of individual steps, or "moves," to bring in donors likely to support the organization on an ongoing basis. The main steps in a successful moves management program include (1) Identification, (2) Qualification, (3) Cultivation, (4) Solicitation, and (5) Stewardship. At each phase of the donor lifecycle, individual contacts, events, contributions, or other activities serve as an individual move in order to bring a donor to the next phase.

The Diamond Club

2024 Goal: \$454,000 2023 Goal: \$450,000

The ARRL Diamond Club is one of the most recognized giving programs to support the future of Amateur Radio. Since its inception, Diamond Club has been a way to support Amateur Radio above the cost of membership. In 2024, Diamond Club is evolving and ARRL is taking this program to another level. Instead of being tied to a member's renewal date, all contributions to Diamond Club will be gifts to ARRL, providing critical support to ARRL programs, services, and benefits beyond what regular dues can sustain. In recognition of regular, continued support to ARRL, the special Diamond Club sustaining donor badge will continue to be given to donors with consecutive giving history.

The Diamond Terrace, which began in 2007, currently holds 2,880 bricks with an additional 92 ready to be installed.

The ARRL Maxim Society

The ARRL Maxim Society honors ARRL donors whose cumulative lifetime contributions to ARRL reach \$10,000. Currently there are 352 individual members in this distinguished group; 16 have been welcomed to date in 2023, and 5 have moved to a higher Maxim Society class this year. Since the program's inception, 53 Maxim Society members have become Silent Keys.

The Maxim Society continues to be an incentive for individuals to contribute to ARRL. Donors who approach this level are notified that they are reaching this threshold, so they are better informed as they make their annual philanthropic plans if they desire to achieve this special recognition.

The Legacy Circle

ARRL is the beneficiary of multiple bequests from donors whose final plans include support for amateur radio through ARRL. From time to time, ARRL is notified that we are a beneficiary of an estate gift from someone without any prior giving history. We would prefer to acknowledge these planned gifts during the donors' lifetime, and not just when they become a Silent Key. By providing information about planned gifts and an awareness campaign for the ARRL Legacy Circle program, our goal is to be able to acknowledge the generosity of these donors during their lifetime.

In 2023, the Development Office launched the ARRL Estate Planning Workbook. This tool is a resource for all radio amateurs, free for download on the ARRL website, that assists in facilitating the next step in a conversation with an estate gift prospect. The Workbook attempts to solve a problem that impacts all amateur radio operators, the clubs they belong to, and the families that love them, by giving them a tool to help with their estate planning. This tool creates an opportunity to discuss those plans, and how those plans might contribute to amateur radio causes like those which ARRL supports.

The composition of ARRL members and prospective donor population is well suited for a robust planned-giving engagement program. The ARRL Legacy Circle program, and the subsequent planned gifts and bequests from this program, will grow through targeted contact with relevant age groups, providing information on planned giving and leveraging the ARRL Estate Planning Workbook to begin that conversation. Estate gifts take time to cultivate and realize. The initial work of establishing relationships, building trust, and getting a commitment from the donor can take place years before ARRL receives the actual gift. In addition, as an organization, we do not know with any certainty the amount of the bequest and what, if any, restrictions have been placed on the gift. For these reasons, while we are aware that we will be receiving funds in the future, we do not have a crystal ball to tell us when to plan to receive those gifts and how they will be recognized on ARRL's books (restricted, unrestricted, endowed). For these reasons, such gifts are not built into the revenues for 2024 and 2025.

ARRL Funds

The Spectrum Defense Fund:

2024 Goal: \$285,000 2023 Goal: \$285,000

In 2024, a mix of email and direct mail will promote the Spectrum Defense fund. Development traditionally offers donor recognition gifts, or premiums, for donations to the Spectrum Defense Fund, at various levels. The offer of donor premiums incentivizes donors to give at levels higher than they might give otherwise in order to qualify for the commemorative gift. In the case of Spectrum Defense, a Spectrum Defense mug has become the anticipated donor gift.

The Education & Technology Fund (ETP):

2024 Goal: \$165,000 2023 Goal: \$145,000

The Education and Technology fund is supported through a mix of major gifts and smaller individual gifts. Solicitation through direct mail is the primary means of attracting individual gifts to this fund. A recent ARRL member survey regarding membership dues provided helpful information on the motivation of our members and donors, but indicated members were less inclined to support education programs than other activities within ARRL. Adding new major donor events in 2024 will allow us to demonstrate a clearer need for philanthropic support from this donor class.

ARRL is embarking on a new phase where STEM education will be a significant part of its growth into the future. The future of this fund, and the growth of the education programs, will need to consider a donor population inclusive of both ARRL members and non-members. New tactics, a robust donor engagement and stewardship effort, and identification and cultivation of major gift donors to the Education & Technology Fund will allow ARRL to achieve the increased goal in 2024.

Additional Development Funds:

There is no planned solicitation for The Legislative Issues Advocacy Fund or the W1AW Endowment Fund for 2024. Contributions to both funds arrive throughout the year without planned solicitations. Other established funds are promoted via the ARRL Website, the Annual Report, the ARRL Current, and QST.

Other Development Activities

ARRL Donor Recognition Reception

The annual donor reception in Dayton on the Thursday evening preceding Hamvention is a favorite tradition for donors and their guests. This annual gathering is the primary recognition event for our new Maxim Society members and combines our most generous supporters of the ARRL Legacy

Circle with planned gifts, Leadership donors giving \$1,000 or more to various funds in the year, and Maxim Society Donors in one place with one another and senior ARRL leadership. In 2024, ARRL has secured the US Air Force Museum in Dayton, OH for this annual event.

Volunteer Exam Coordinator Maria Somma, VEC Manager

Department Mission and Goals

The ARRL VEC provides licensing examinations for prospective new hams and upgrade examinations for those already licensed. It also assures that a sufficient number of examination opportunities are available on a schedule that is convenient to the applicants.

The ARRL VEC provides the examination candidate with tests that meet all applicable requirements of current Federal Communications Commission Rules and Regulations and are administered in accordance with those requirements and generally accepted educational testing principles and practices.

The ARRL VEC provides a service level of the highest order to our customers, the Volunteer Examiners. -- Resolution of the ARRL Board of Directors (1989 Annual Meeting)

Products and Services

Volunteer Examiner Administration

- Accredits qualified Volunteer Examiner (VE) applicants by soliciting across a broad spectrum of Amateur Radio operators.
- Registers and publicizes the scheduled exam activities of ARRL VE teams.
- Supports VEC services at hamfests/conventions.
- Conducts special mailings to VEs.
- Promotes ARRL membership and publications.
- Provides essential VEC and FCC information in *QST* Exam Info column and articles, online news items, and VE e-newsletters.
- Stays up to date on FCC rules and regulations to ensure VEC and VEs are in compliance.

Exam Administration

- Supplies printed exam materials and/or software to meet the VE team's examination needs.
- Receives and processes the completed exam session results and electronically files successful applicant license data to the FCC.
- Answers exam and license related inquiries regarding the licensing process.
- Files all test session data electronically to the FCC within three (3) business days or less.
- Maintains the highest degree of service and integrity in ARRL VEC examinations.
- Participates as a member of the National Conference of VECs Question Pool Committee.

Call Sign Administration

- Manages the FCC Club Call Sign Administrator program for FCC and ARRL, as one of four such coordinators, to provide an electronic filing mechanism for FCC Club Station License applications.
- Receives and processes the completed exam session results and electronically files successful applicant license data and club license data to the FCC.

- Administers the 1x1 Special Event call sign program for FCC and ARRL, as one of five such coordinators.
- Provides FCC-license renewal notices to ARRL members and processes license renewal requests received from members at no charge. Non-members will be charged a fee.
- Manages the electronic filing mechanism for FCC license modifications (changes in name/call/address). The service is available to ARRL members for free and to nonmembers for a fee.

Additional Services

- Manages and maintains the *QST* Silent Key column.
- Administers the License Class Certificate Program.
- Administers the International Amateur Radio Permit (IARP) program for FCC and ARRL.
- Successful organizational presence at yearly NCVEC conference and fosters connections with other VEC organizations.
- Consistently provide reliable information to customers and delivers superb customer service.
- Assists with field-based membership recruitment by providing Volunteer Examiners with flyers promoting membership to newly licensed hams at VE exam sessions.
- Maintains, updates, and improves areas of the website for which we are responsible.
- Liaison between licensees and the FCC, resolving difficult and multifaceted individual and club licensing issues.
- Collaboration with the Education and Learning department to create an ecosystem for customers; attract them as members and serve them at every licensing step and beyond.

VEC Program Results

The extraordinary demand for online exams during the pandemic forced the quick transformation and advancement of the Amateur Radio testing industry. Remote video-supervised online testing has been steady since April 2020. Additional Volunteer Examiner Coordinator (VEC) organizations and their teams are being trained to use the ExamTools online examination system as the program continues to add features to accommodate the community's needs. ExamTools was the only online exam system available to the VECs at the beginning of the COVID pandemic. As the number of VECs using the system grows, our market share declines. Unfortunately, our product has become a commodity in the online exam system. Our exam fee is the most expensive at \$15 for the same license processing service and license issuance times.

As VEC organizations continue to shift their VE teams to the ExamTools online examination system, this will further amalgamate the examination industry. We continue to expand our presence on the platform by shifting our VE teams from using paper exams to online exams. ARRL VE teams are being trained and added to the system every month. Our 2023 license activity increased in the system over 2022 despite the downturn in new license requests. ARRL VEC's market share is currently 65% for overall FCC license activity (Table 1) and is 31% within the ExamTools system (Table 2). Our market share in ExamTools increased by 4% over last year.

The ARRL VEC exam fee will remain at \$15 in 2024. The number of VEs using web-based services, the online exam system, and session upload web page, must continue to grow. We are

mindful of the significant time commitment for our VEs to train and of the potential for higher reimbursement fees during the transition to online testing (video platform yearly subscription fees, tablet costs, and e-payment transaction fees).

Our program levels are projected to remain relatively flat through 2024 and 2025 as we continue to expand electronic session testing and filing and move towards a fully digital program.

TABLE 1: ARRL VEC OVERALL MARKET SHARE						
FCC LICENSES ISSUED	2021	2022	2023 through September	2023 Projection	2024 Projection	2025 Projection
NCVEC License Activity	42,988	38,556	29,275	40,000	38,000	39,000
ARRL VEC License Activity	28,611	24,927	18,893	26,000	25,000	26,000
ARRL Market Share of Exams Given	67%	65%	65%	65%	66%	67%

TABLE 2: ARRL VEC EXAMTOOLS MARKET SHARE						
FCC LICENSES ISSUED	2021	2022	2023 through September	2023 Projection	2024 Projection	2025 Projection
ExamTools License Activity	14,773	16,002	12,486	13,000	18,000	20,000
ARRL License Activity	4,809	4,285	3,853	4,500	6,300	7,500
ARRL Market Share of Exams Given	33%	27%	31%	35%	35%	38%

FCC Activity

Through the end of August, successful new applicants were running behind both pre-pandemic totals and the last few year's results. New licenses should fall short of the original 2023 year-end prediction (original 28K vs. reforecast 25.3K). Approximately 2,200 less new licenses have been issued this year compared to the same period last year. Upgraded licenses have been elevated over the past few years and will end higher than the original year-end target (original 11K vs. reforecast 12.7K).

The \$35 FCC application fee (effective April 19, 2022) is believed to be having an impact on new licenses and our ability to attract examinees in the online system. The candidates are understandably going to pick the free or less expensive exam sessions, especially if they are

applying for a new license which requires the FCC fee. There is no FCC fee to upgrade a license and those upgrade numbers continue to be strong. The negative response to the \$35 payment from the community may have dissuaded potential newcomers.

Amateur Radio interest and examination requests is expected to remain fairly stable in the coming years with a slight decline in the projection for new license requests compared to previous years. The forecast is 26,000 new licensees and 12,000 upgrade licensees in 2024, and 27,000 new licensees and 12,000 upgrade licensees in 2025 (Table 3).

TABLE 3: NEW AND UPGRADED FCC LICENSES BY YEAR						
FCC ACTION	2021	2022	2023 through September	2023 Projection	2024 Projection	2025 Projection
New Licenses						
Technicians	28,021	23,921	16,916	24,500	23,700	24,700
Generals	3,183	2,537	1,882	3,000	2,000	2,000
Extras	393	345	261	500	300	300
Total New	31,597	26,803	19,059	28,000	26,000	27,000
Upgraded Licenses						
To General	8,531	8,383	7,137	8,500	8,500	8,500
To Extra	2,860	3,370	3,079	2,500	3,500	3,500
Total Upgraded	11,391	11,753	10,216	11,000	12,000	12,000
GRAND TOTALS	42,988	38,556	29,275	39,000	38,000	39,000

The total number of US Amateurs continued to grow each year since the FCC license class restructured and the elimination of the Morse code test requirement in 2007. That changed in April 2022, when the FCC application fee took effect for the Amateur Radio service. As of September, the number of licensees in the FCC database is 758,757 and continues to decline. While it's an all-time high for General and Extra class licenses, new Technician licenses peaked in 2021 before the FCC fee was implemented. The \$35 FCC application fee is a potential deterrent for new licensees and a barrier for amateurs renewing their license. The outmoded Novice and Advanced class licenses continue to decline. As the Amateur Radio community learns to navigate the new FCC websites and becomes more amenable to the FCC payment, perhaps this will help attract prospective hams.

New Technology, Initiatives, and Services

Remote video sessions have played a large role in the amalgamation of the industry and the commonization of services. A significant challenge facing our VEC is to remain competitive in the examination market as our competition modernizes their operations, moves their business to the online exam platform, and offers reduced or free license examinations. It will become increasingly difficult to meet projections and retain our market share as the examination industry continues to consolidate.

As other VEC organizations digitalize their operations, and the examination industry continues to integrate into the ExamTools online examinations system, this will have important implications on the future of our VEC. We must remain competitive in this marketplace, strive to improve the efficiency and effectiveness of our program, and continue to aggressively leverage space and examinees on the ExamTools system.

2024 will be the last year ARRL VEC will create, print, and ship new examination booklets, moving us closer to our complete digital transformation. VE teams using paper tests must transition to the online exam platform in 2025. Shifting teams to this system will reduce VEC printing, storage, shredding, and shipping (both to and from the team) expenses. However, VE teams are claiming more exam session administration expense recoupment as they switch to online exams. Technology fees (video platform yearly subscription fees, and e-payment transaction fees) to conduct remote sessions, and tablet costs and increased venue costs for in-person sessions are driving up reimbursements. Teams using online exams for in-person sessions are not required to mail any documents to the VEC, which is helping to reduce our shipping costs and to automate data entry.

ARRL VEC will continue to advertise and deploy online session procedures, increase the number of teams using the online exams, expand our presence in ExamTools, and lead candidates to our teams in the system. As we continue to push teams towards electronic testing, we must be cognizant to head off any further impact to our revenue stream and market share.

We hope our VEs are willing to take on this challenging and demanding assignment which is vital to our business and the Amateur Radio community.

2024/25 ARRL VEC Digitalization

ExamTools Online Examinations: System Information

The ExamTools platform offers four options for exam sessions.

- 1. Remote video-supervised test session with online exams.
- 2. In-person test session with online exams.
- 3. In-person hybrid test session with some online exams and some paper exams.
- 4. In-person test session with all ExamTools generated paper exams.

One advantage of ExamTools is that regardless of the type of exam session that is managed through the system, it will track the candidate from start to finish and create an output file for the VEC. ExamTools provides a comprehensive solution for managing and tracking all types of exam sessions.

Business Plan: Move from Paper to Online Exams

To motivate our VEs to move from paper tests to online exams, we can consider the following strategies.

- (a) Highlight the benefits and explain the advantages of using online exams.
- (b) Address concerns and make the transition gradual.
- (c) Provide training and resources.

- (d) Foster a sense of community and collaboration.
- (e) Show our support throughout the process.
- (f) Maintain open and collaborative communications with the ExamTools developer and the volunteer IT staff.

By applying these strategies, we can motivate volunteers to embrace online exams, help to make the transition as smooth and successful as possible, and empower our VEs to increase participation, engagement, and interaction with the ARRL VEC, potential exam candidates, and in the ExamTools system.

Contingency Plan: Business and Financial Impact

Many of ARRL's VEs have been with the program since its inception and conducting exam sessions is their only or one of a few ham radio activities that they enjoy participating in. They have been loyal to and have been contributing to the program for nearly 40 years. They are valuable to ARRL's vision, and value them, their time, and commitment. Training volunteers to use a new system will be a huge undertaking, not without pushback. Understandably, there are those who simply don't have access to technology. Moving forward, we will have to evaluate these on a case by case basis and as an exception not the norm.

Potentially, if a considerable percentage of our VEs cannot switch to the online exam platform and must continue with paper exams or are unwilling to switch, we should consider the following strategies.

- (a) Accommodate their needs and maintain fairness without fear of a penalty.
- (b) Communicate clearly and address concerns.
- (c) Continue to handle the logistics of distributing, collecting, and grading paper exams efficiently.
- (d) Evaluate alternatives and continually assess feasible ways for these VEs to transition to the online platform.
- (e) Gather feedback from successful teams to make improvements in the examination process for all customers and volunteers.
- (f) Recruit new volunteer examiners to offset a potential decline.

By addressing these points, we can maintain a fair, collaborative, and inclusive examination process for all of our volunteers, help to mitigate losses, and continue to inspire trust and loyalty as we shift our business.

While the online exam system will reduce VEC printing, storage, shredding, and shipping expenses, it may not initially be enough to offset a potential and significant revenue loss. We must have recovery strategies in place, mitigate the impact of the event, and take steps to make a full recovery after the event. We will adapt to the situation and adjust our communications, strategies, and tactics based on our VE's responses and behavior. We will need to monitor the ongoing VE reactions and respond to new issues or opportunities. We will also need to maintain our relationships, reputation, and trust with our customers (our VEs), and continue to monitor and review risks.

Additional Action Items and Strategies

- We will continue to promote electronically filing session documents from the field, ExamTools online examination system, and continue to fine tune programing, connectivity, and reporting between the FCC EBF system and ARRL's systems.
- Improve awareness of ARRL VEC in the community by expanding our advertising and identifying further opportunities for promotion of VEC services and products.
- Collaborate with the Education and Learning department and their instructors.
- Increase attention on recruitment methods to attract new VEs and new examinees. Recruit
 examinees that upgrade to General and Extra (who are not already ARRL VEs) and point
 them to our VE training material. Recruitment is an important piece in increasing our
 volunteer numbers.
- Improve our communications with our internal customers (VEs) and our external customers (examinees) and show our capabilities and value to serve the public. Strengthen and galvanize our volunteers' commitment to serving the community; motivate and empower our VEs to participate, engage, and interact more with ARRL VEC. Connect with underutilized volunteers.
- Maintain regular contact with customers and continue to deliver superb customer service.

Summary

In 2024, as we continue to modernize the ARRL VEC department, we will remain competitive in the electronic testing market and committed to offering quality programs and services; we will provide a superior overall experience for our customers and potential customers and demonstrate our capabilities and value to serve the public.

These strategies will help our program remain strong and active in the Amateur Radio community. Our commitment to delivering a fast, easy, and affordable solution allows teams to speed up FCC license grants for customers who expect to see their FCC licenses quickly. Hopefully, heading off a further market share decline and giving us traction to grow our customer base. Stronger business results will be attained by meeting our VE teams' expectations, being less dependent on USPS and paper applications, and achieving higher customer satisfaction due to the shorter wait times for license issuance.

By 2025, the desired outcome would not only be to remain competitive but to grow our electronic session activity, improve our customer engagement, and decrease expenses.

The pandemic served as a catalyst to accelerate changes that were already happening. We know that we must keep an eye on our future and new technology, and we must be poised to thrive in the electronic testing world.

Radiosport and Regulatory Information Bart Jahnke, Radiosport & Regulatory Information Manger

Awards

As anticipated, overall on-air activity (especially digital) has benefitted from the solar cycle. HF-fueled by an increase in HF DX-peditions, VHF+ - driven by a rise in State-peditions at 222 and 1296 MHz, and Grid-peditions – continue to see increased activity and Award excitement. The increases in sunspot activity, together with summer e-skip, has been welcomed around the world.

ARRL Award application processing volume has increased, exceeding projections year-to-date. Requests for endorsements continue to be in large part due to increased digital mode activity. With continued/strong digital-modes interest, award seekers are spending free time applying for DXCC awards and backfilling their endorsements for all awards (including their challenge bands/modes). This trend is expected to continue into 2024.

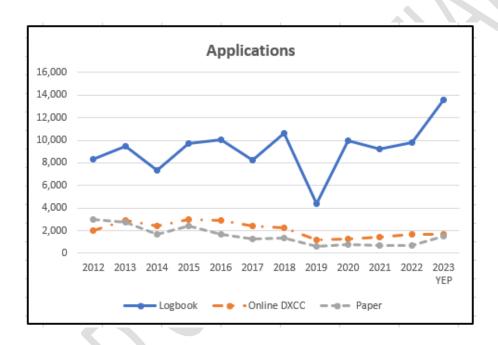
Award Activity

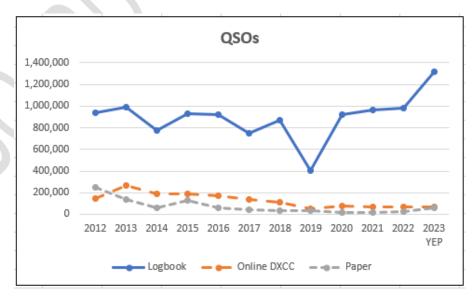
Award	2020 Total	2021 Total	2022 Total	2023 Projection	2024 Projection
DXCC	12,241	11,227	12,636	16,774	18,500
WAS	2,990	3,302	3,155	2,376	3,800
VUCC	1,290	1,749	1,715	1,534	1,750
WPX	1,099	969	759	992	1,000
WAZ	951	873	812	1,518	1,500
WAC	167	125	84	98	110
Mobile DXCC	4	6	7	2	3
QRP DXCC	0	5	11	14	15

Awards Processing

The trend of fewer paper applications as compared to LoTW applications continues as the overall volume of transactions has increased. Most paper cards submitted for DXCC awards are entered through the Online DXCC Portal. Because QSO information is entered online by the applicant, HQ staff time is reduced to making edits/corrections. The continuing objective is for all Paper QSL Card applicants to enter the Awards system through Online DXCC and eventually solely via LoTW.

The graphs below show this continuing trend.





Logbook of The World

LoTW continues to show exceptional activity. With sunspots ever increasing - driving Cycle 25 propagation to new heights, boosts in activity from digital modes continue to fuel activity and supply refreshing interest on the HF and lower VHF bands. Currently, the greatest ARRL activity through LoTW is with Award endorsements.

LoTW Stats (as of 28 September 2023)

1,772,572,596	QSO records have been entered into the system.	
397,650,897	QSL records have resulted.	
176,812	Users are registered in the system	
252,008	Certificates are active	
82,124,588	User files have been processed	

The legacy LoTW platform is presently in a "maintain" mode, though we have migrated datastores to the AWS cloud and have experienced a substantial boost in processing QSO-file upload time. Maintaining status quo has been effective as there has been substantially no downtime for months.

With the assistance of a consultant familiar with LoTW, additional infrastructure work will take place to help transition the TQSL program (a significant part of LoTW process that requires installation on our user's computers) to a server-based application that would not have any installation requirement. This is where the vast majority of LoTW customer service efforts are focused. Another opportunity is the elimination of the use of postcards in the LoTW process. This will eliminate those postcard, printing and postage costs associated with the LoTW registration process.

Contests

Year-to-date, 2023 contest activity remains strong for ARRL-sponsored Contest events. The IARU HF event was up nearly 41% driven by the WRTC event running in parallel. Field Day entries were down slightly as expected as fewer home stations were on, as these operators returned to field group activities. The 222 MHz and Up saw a 23% increase (though its yearly activity trends have generally been lower than we'd hoped); and ARRL September VHF entries were up over 5%. Contest activity is expected to remain at 2023 levels in 2024.

In 2024, the pricing of plaque sponsorships will be reviewed. The agreement that Icom currently has references 150 plaques (from 2005). Today, the volume is around 250 plaques annually. The review will include a review of costs along with the possible repricing of the sponsorship.

Contest Statistics (2019-2023 YTD)

Entries HF	2019	2020	2021	2022	2023	2022- 2023 % Change
DX - CW	4,208	4,380	4,820	4,854	5,293	9.0%
DX - SSB	3,100	3,528	3,717	3,961	4,823	21.8%
DX Total	7,308	7,908	8,537	8,815	10,116	14.8%
SS Phone	1,578	2,038	1,686	1,663		
SS - CW	1,293	1,444	1,422	1,347		
NOV - SS	2,871	3,482	3,108	3,010		
SKN	185	186	214	190	176	-7.4%
RTTY	2,672	2,087	2,349	2,351	1,815	-22.8%
Intl Digital				1,452	963	-33.7%
FD	3,114	10,215	5,979	4,936	4,562	-7.6%
IARU	4,519	5,700	5,211	3,969	5,589	40.8%
160-M	1,639	1,690	1,581	1,594	1,252	-21.5%
10-M	1,885	3,874	3,086	3,116	5,874	88.5%
Total HF	24,193	35,142	30,065	29,433	30,347	3.1%

VHF	0.12	0.42	1.104	1 177	000	22.664
JAN	942	942	1,196	1,175	898	-23.6%
JUNE	1,306	2,148	1,589	1,709	1,617	-5.4%
10-GHz	127	122	138	150	97	-35.3%
222 MHz	157	171	141	118	145	22.9%
SEPT	696	832	745	672	708	5.4%
EME	193	243	187	209		
Total V/UHF	3,421	4,458	3,996	4,033	3,465	-14.1%
(T) (1 A 1) Y	27 (14	20.700	24.061	22.456	22.012	1.00/
Total All Logs	27,614	39,600	34,061	33,476	33,812	1.0%

QSL Bureau

The current QSL Bureau rate structure went into effect May 15, 2019. This returned the rate structure to 2011 rates, with no allowance for postal rate increases that often now take place multiple times a year. Increased rates for QSL services will be evaluated during 2024 in the hopes to bring pricing in alignment with costs. The trend of more transactions with fewer cards has leveled off since the roll back in 2019, requiring more staff resources to open/sort/process more, smaller packages. From 2020 to 2021 there was a 33% reduction in transaction size from about 15 cards to 10 cards per transaction. That 10-card trend has continued through 2023 (1 ounce per QSL card).

	2019	2020	2021	2022	2023 Projected	2024 Projected
Total Transactions	2,419	2,247	2,903	3,001	3,000	3,000
Total Weight (oz)	28,211	33,914	29,834	30,999	30,000	30,000
Avg Weight Per Transaction	11.7	15.1	10.3	10.3	10.0	10.0
Total \$ Collected	\$24,120	\$14,002	\$16,602	\$16,447	\$17,000	\$17,000

Volunteer Monitor Program

Riley Hollingsworth will continue to be the face of the Volunteer Monitor (VM) Program. He maintains an active group of Volunteer Monitors with the goal of reducing the number of operating irregularities through incident reporting, publicity, and Good Operator Reports. No increase in VM reporting is expected as the program has gain publicity and has become a deterrent for those who skirt the regulations.

Activity Summary

Activity	2021	2022	2023 Year End Estimate
Hours Monitoring HF	19,454	23,693	19,454
Hours Monitoring VHF/UHF/Other	24,319	30.476	24,319
Incident Reports	354	549	354
Advisory Notices	162	120	162
Good Operator Letters	12	24	12
Referrals to FCC	12	10	12
Referrals from FCC	7	0	7
FCC Meetings	10	10	10
Club/Group Meetings (Virtual or In-person)	19	7	19

Field Services Mike Walters, Field Services Manager

The Field Services Department provides a variety of services to the ARRL Field Organization. The department oversees the Section Manager election process for each of the 71 ARRL Sections across the country. Field Services also supports the Section Managers in ways of their individual needs for supplies such as flyers, brochures, training, and new program support.

Field Services also serves as the clearinghouse for information relevant to the ARRL affiliated Amateur Radio clubs. This allows direct communication to the clubs through a variety of channels. Information can be sent through the Section Managers and through the local Affiliated Club Coordinators to clubs in each section. Additional communications include a monthly email newsletter, Club News. This newsletter is currently distributed to just under seventy thousand members with an open rate of approximately fifty percent. This compares favorably with other email newsletters from ARRL.

Field Services conducts monthly meetings with the Section Managers as well as an annual Section Manager Workshop for new Section Managers. Monthly meetings are held on the Teams platform, this allows the meeting to be recorded as well as the production of an attendance report. rt. On average just over half of the Section Managers attend the meetings but all receive a link to the meeting recording. Monthly interaction, at a minimum, allows Field Services to address questions and introduce the latest programs. These meetings are a structured format for ARRL to inform Section Managers of new programs or initiatives. The Section Managers also receive regular emails through the Section Manager Outlook Group on ever-changing issues.

A continuing effort to update and improve the online resources for Section Managers, their staff, and clubs, has us looking at the available resources on the ARRL website. Constant updates of the website are necessary as programs change and new resources become available. The emphasis is shifting from printed brochures to online resources that are available via tablet, computer, and phone. Two different approaches are being developed. One for the public to learn about Amateur Radio and the other for existing hams to learn about available benefits and services.

Improving communication with the field organization through maximizing the use of available technology needs to be a priority. Microsoft Teams is available to all staff and field organization. Online versions of the application for Affiliated Clubs, Special Service Clubs, and registration for Hamfests and Conventions are in development. All of this to improve overall efficiency and lower costs. Online awards such as First Contact Award, Mentor Award, and Rag Chewers Club are moving to digital self service awards. Before, the awards went into a cue and waited to be printed and mailed. The move to digital means the member can fill out the award and download a PDF to print themselves. This saves staff time, envelopes, and postage. This approach allows ARRL to concentrate limited staff resources on other projects and reduce labor intensive and non-revenue generating tasks.

The general budget for the Field Services department has minimal changes for 2024:

Postage

Field Services administers the Section Manager elections on a rolling quarterly schedule. With a potential of four cycles with multiple elections a year, the expense of an election is in printing and postage. The number of elections is determined by candidate participation and there is no way to predict how many elections will actually be held in any given year. Each election could result in mailing ballots to each member in that section. If multiple sections have elections the number goes up accordingly. It is common that an election will be uncontested, and ballots are not required, therefore making expense planning difficult.

Currently there is no plan to change the current system to an electronic voting program for Section Managers because of the prohibitive cost of running small elections.

Stationary, Printing, and Forms

This category is also a direct result of the number of elections that are managed. Of course, the more elections, the more expenses are incurred in printing ballots. The number of members in the section determines the number of ballots. Each ballot must have both a mailing and a return envelope, as well as the ballot itself along with the candidate statements. Currently, all the printing for Section Manager elections is black and white to minimize costs.

Business Travel

Field Services regularly receives requests to have a staff member attend and speak at a local hamfest or convention. Experience shows that it is not economical to support most of these events in person. The average cost of sending someone to speak at an event is around \$1,700, and results in them often speaking to ten people or less. The increased usage of programs like Zoom and Teams has shown more events can be supported virtually with great success. The cost of virtual events is negligible. ARRL will continue to support events in this manner going forward.

The 2024 budget includes \$10,000 in travel for the New Section Manager Workshop in the fall. Travel for the Field Services Manager to attend the major hamfests, if deemed appropriate, is planned for in the Exhibits department plan. No additional travel is planned.

Staffing

Field Services, as a small department, has few resources for extensive cross training. This leaves the department vulnerable if an employee is out for an extended period of time or chooses to retire. Additional staff resources and cross training are essential to maintaining workflow, efficiency, and member support. While a cross training program with tasks such as club affiliation and Special Service Clubs renewals has been instituted, a more expansive effort needs to be made to guarantee a consistent level of service with succession planning.

Ideas

The ability to process applications and renewals at local hamfests by the Section Managers is possible with an application in development. This allows the Section Managers to use a laptop or tablet to process transactions and take credit card payments. Further development in this area is necessary and should be made a priority. Proper security is necessary, but this could be a

particularly valuable tool for the Section Managers to use at local events. Continued development and testing with the interface to ensure all the information required to process transactions and for each event to be associated with a unique id will require staff resources.

The application for Affiliated Club and Special Service Club needs to be updated with integrated requirements and approvals. The current system is time and labor intensive with multiple opportunities for failure. In working with IT to tailor the application to the required data inputs for the club a form can be built to gather what is required. The addition of an approval routine as well as a notification to the person submitting the forms would increase efficiency and member satisfaction. Once the form is built, a dashboard of applications could provide a visual indication of work in progress, the stage that it is in, and time in process.

Many manual processes could be accomplished with the proper application of relatively simple technology. The Section Managers would like to have a way to make nice recognition certificates for members that deserve accolades. The certificate generator that is used for appointment certificates could be adapted to automate additional certificates. Work is under way to build a new set of certificates that can cover a wide range of applications. Certificates are being designed for appreciation, dedication, and accomplishment. The Section Managers can print these themselves or take them to a local Staples for print.

W1AW

Joe Carcia, W1AW Manager

For all scheduled transmissions, W1AW transmits on 160, 80, 40, 20, 17, 15, 10, 6, and 2 meters, running anywhere from 800 to 1000 watts (depending on band). This is done using CW – with speeds ranging from 5 to 35 WPM – as well as the digital modes Baudot, BPSK31, and MFSK16. There is also one (1) voice bulletin at 9:45 PM, daily.

In 2024, we expect to transmit a minimum of 250 bulletins, based on bulletin counts from previous years.

In addition to the scheduled practice/bulletin transmissions, W1AW also provides at least two hundred and four (204) Qualifying Run transmissions each year. The speeds start at 10 WPM, up to a maximum of 40 WPM. Currently, three (3) stations on the West Coast provide a single run per month (for the benefit of West Coast/Pacific stations) for a total yearly run of 226 transmissions.

In general, the number of visitors to W1AW varies, depending on the time of year and weather. It is not uncommon to see anywhere from 500 to 700 visitors each year.

W1AW is considered an EOC (Emergency Operations Center) based on those definitions set forth in the ARRL Field Day rules. This allows the station to be called into operation for communication operating events – such as any weather system adversely affecting the US - or SHARES/MARS communications exercises, in addition to any operating exercise that incorporates Amateur Radio.

W1AW's operating exposure is enhanced by the many visitors who place W1AW on the air. This exposure is also prevalent when W1AW is active during the many operating events (contests) that take place throughout the year.

Since W1AW is visited by people from all over the world, its appearance must be aesthetically pleasing as well as be functional. The 2024 projects include a new front step and refurbishing the window grates.

In 2024, W1AW is slated to replace two (2) transmitters used for its scheduled transmissions, as well as replacing two (2) antenna rotators with new DXE RT4500HD models. They will replace M-Square Antenna System (Orion) OR-2800 rotators that were installed in 2001.

Emergency Management Josh Johnston, Director of Emergency Management

Moving into the future with the Emergency Management Department will be promising this year and come with many moving parts coming into place with progress in training, planning, and testing. The department will continue building relationships at the national level with national partners and strengthening its position to support emergency communications. In addition, the department will seek new ways to better serve those partners in education and outreach.

Emergency Management will also be continuing to build and support local and state volunteer resources and encourage their communications and partnerships within their local community. As a national organization, the relationships with national partners will set an example and expectation for the local communities and organizations.

Ongoing Activities include:

- The Director of Emergency Management will continue quarterly calls, that began in 2023, with the Section Emergency Coordinators and will be regularly meeting with ARES groups around the country to support them and encourage participation in their activities.
- The department will continue to build awareness and prepare to better support its longstanding motto of "When All Else Fails" by supporting the local and state level volunteers to be prepared to assist in times of disaster. Emphasis will also be placed on solutions and partnerships for providing situational awareness for emergency organizations.
- The department expects to complete work with the National Weather Service to establish a new Memorandum of Understanding in 2024.
- The department will also continue working with the subcommittee for the National Traffic System to look at ways for NTS to continue to provide services in to the future.
- Work will continue with the ARES subcommittee to look at relationships with tribal organizations and others that ARES may be able to assist with preparation and providing trained personnel.

New, forward-looking projects will include:

- Staff will be looking to build systems for demonstrating the ability to integrate Amateur Radio into the Emergency Response Framework to provide remote infrastructure in times of emergency and where infrastructure has been heavily damaged or completely compromised.
- The department plans to work with the Information Technology team to better track resources, including individual volunteers. By building a volunteer database, staff will be able to provide information on training and the number of volunteers available during a disaster. It will also give the department a better ability to assess and adjust the training program as needed.
- The updated ARES training program will be released in early 2024, giving a fresh look to the training and education for EmComm. The ARES Task Book will be slightly updated

from its current version to better aligned with the course updates to support advanced training and education. The Task Book is a working document that enables those ARES communicators electing to participate in the ARES training plan to track and document their training plan elements as they are completed toward the various levels of increasing proficiency.

- The Director of Emergency Management will be attending three served agency partner conferences over the next year to assist in continuing education as well as interaction and networking with Emergency Management Professionals across the country.
- As far as any financial investment for next year, plans are underway to build a deployable AREDN network that will be a model to local teams around the country and be able to be used during times of disaster. Alternate power solutions will be added to some of the Ham Aid go kits for deployment in an area that has lost all power.

2024 brings about a new prospect for ARRL in the Emergency Communications community. The election of ARRL to SAFECOM will allow ARRL a seat at the table for the future of planning in Emergency Communications. SAFECOM is managed by the Cybersecurity and Infrastructure Security Agency (CISA). Through collaboration with emergency responders and elected officials across all levels of government, SAFECOM works to improve emergency response providers' inter-jurisdictional and interdisciplinary emergency communications interoperability across local, regional, tribal, state, territorial, international borders, and with federal government entities. SAFECOM works with existing federal communications programs and key emergency response stakeholders to address the need to develop better technologies and processes for the coordination of existing communications systems and future networks.

The Emergency Management Department will be looking at the development of a new recruiting campaign to attract volunteers to become active in their local ARES group. We hope to have a scalable program that will allow local groups to use these resources to grow their teams and attract new and experienced hams.

The strength of the ARES program and Emergency Management is in a good position to grow and improve communications and partnerships both internally and with served agencies.

Education and Learning Steve Goodgame, Education and Learning Manager

Overview

The department will put significant time and resources into positioning ARRL as a frontrunner in the STEM Education space. Additionally, the ARRL Teachers Institute on Wireless Technology will continue to adapt to meet the needs of today's educators. TI-2 will be modified this year, and Teachers Institute 3 will be introduced. The ARRL Learning Center will continue to grow and create new learning content.

The ARRL Technician Bootcamp will be instituted, as well as live zoom calls with members for continued learning (Tech Night).

Staffing

Currently, Teachers Institute operates using contract instructors. There are four instructors who regularly teach TI. As the program continues to grow and evolve, we will need to either acquire more contracted instructors or consider hiring a full-time staff instructor.

ARRL Learning Center

Efforts will be focused on these key areas in 2024:

- Continued growth in member usage of the Learning Center The Education and Learning Manager will continue to write a column for On The Air to highlight various courses and offerings of the Learning Center. Additionally, the Learning Center will be the centerpiece of booth space at Hamfests in which the Education Department is represented.
- *Managing the ARRL Learning Center* Usage of the Learning Center continues to increase, and as such, options to accommodate the growth must be investigated. Research will begin to consider alternative platforms, in cooperation with the IT department to find a platform that provides the best possible experience for users and remains cost effective.
- Lesson Plans Teacher/Educator Lesson plans have been developed and placed on the Learning Center. These plans are available to members and non-members. This repository of plans will be enhanced throughout the year. All plans are correlated to state/national education standards.
- *EMCOMM Courses* The courses have been transitioned to the Learning Center. Members who are already taking courses on Canvas will be allowed to complete courses there, but all new courses are done through the Learning Center. This has, and will, continue to increase the usage of the Learning Center. As such, the subscription to Path/Blue Sky may need to be modified to allow for increased usage.

- *QST Column* The Education and Learning Manager will continue to author a monthly column in QST to highlight YouTube channels that have quality Amateur Radio learning content.
- Club Leadership Courses Work will continue to produce and maintain the Club Leadership Course series in coordination with Field Services.
- *Content Growth* The department will continue to seek content-creators to produce specific content for the Learning Center.
- *Population Targeted Content* Courses and content will be developed to engage with specific interest groups that are likely to contain high numbers of prospective hams.

Youth Outreach

The Education and Learning Department will actively research and implement programs to engage youth in Amateur Radio.

- Youth Polling at hamfests will continue to be conducted at hamfests to ascertain current interests and help steer program development.
- Surveys will be developed and distributed to students through teachers to determine possible programming.
- Youth on the Air operating events will be promoted (JOTA, SCR, Collegiate Operating Event)
- The Education and Learning Department will continue to work toward increased involvement with 4H and Scouting groups.
- The Education and Learning Dept. will continue to work toward a partnership with Girls Inc. as an avenue to increase youth outreach and increase the number of girls engaged in Amateur Radio.
- School outreach will be increased through attendance at teacher conferences.
- Targeted direct mailings will be researched for possible information packets to be mailed to qualified candidate schools.

YouTube Content

- The Education and Learning Manager will continue to foster and maintain relationships with YouTube content creators to forge partnerships for the betterment of Amateur Radio.
- Work will continue with content-creators to create specific content for the ARRL YouTube channel.

Education and Technology Program ETP

- Teachers Institute on Wireless Technology
 - o Teachers Institute will continue to evolve, continuing the modifications to TI-1. This year, TI-2 will undergo an update to modernize the curriculum.

- We will add an additional Teachers Institute to the offerings in Teachers Institute 3.
 This institute will focus heavily on space and high-altitude ballooning. These are both areas of high interest to youth.
- The number of Teachers Institutes will need to increase to accommodate the growth of TI-1. It is possible we will have to conduct two sessions of TI-2 for the first time ever, plus one session of TI-3.
- o Monthly "Teacher Talks" will be developed and hosted on Zoom. These will be informal gatherings of teachers who are interested in Amateur Radio and wireless technology as a part of their STEM programs.
- o Grant funding is being requested from ARDC to implement a mini-grant program. This program will consist of class sets of vital equipment for teachers.
- o ARDC funding has been requested to create classroom STEM kits based on discussions with Rosy Schechter, ARDC Executive Director. She suggested applying for a relatively small amount as a prototype model, and if successful can continue on.
 - Kits will be available to past participants of Teachers Institute in a mini-grant format.
 Teachers will be required to submit applications and example lesson plans to be considered for the grant.
 - Kits include basic electronics kits, Arduino kits, and a GeoChron.

• ETP Grants

- o ETP Station grants will continue to be awarded to teachers. Funding has been increased to allow for more qualified grants. We expect as TI continues to grow, so will the number of grant applications received.
- o ETP Station grants are awarded to schools that provide a plan to use Amateur Radio as a part of an enrichment program and/or as a part of their classroom instruction. The definition of a "station" grant is flexible, so as to allow teachers who wish to provide opportunities for kids in various areas of Amateur Radio, such as high altitude ballooning, fox hunting, space communications, etc.
- o ETP progress grants are awarded to support teachers who are currently using Amateur Radio as an instructional tool and need additional resources to expand or maintain existing programs.

Education and Learning staff will actively promote ARRL Education and Learning programs through attendance at education conferences, hamfests, social media, etc. opportunities. Attendance is planned at the following conferences:

- International Society of Technology in Education (ISTE) shared booth space with ARISS
- National Science Teachers Association shared booth space with ARISS
- Texas Computers in Education Association
- Ohio Educational Technology Conference booth space is compensation for speaking
- American Physics Association
- Space Exploration Education Conference (materials will be distributed by ARISS partners who have attended TI)

ARISS (Amateur Radio on the International Space Station)

The department will continue to work closely with ARISS to cross promote activities and programs. We will continue to partner at education conferences to allow for increased visibility and to reduce overall cost of exhibit space.

Special events between NASA/ARISS/ARRL will expand to create inspirational activities for teachers at teacher trainings.

License Instruction/Licensing

- The Education and Learning Department will begin the Ham Radio Bootcamp series. This
 series did not start in 2023 due to technical difficulties with getting certain aspects of the
 program to function properly on ARRL's platforms.
- The Education and Learning Department will work to become the de-facto VEC License Exam resource for school and youth programs.
 - Teachers who have students ready to take an examination will be able to facilitate license exams being taken directly through the Education and Learning Department at ARRL HQ.
 - Testing will be done using ExamTools and will be done remotely through the ARRL Education and Learning Department at no charge for students.
 - ARRL will waive the \$5 fee for students taking the exam during school hours on campus through the coordination of the teachers and the ARRL Education and Learning Department.
 - Students who obtain their license will then be entitled to reimbursement through the Youth License Fee program that reimburses the \$35 FCC fee for those under the age of 18.
 - It is anticipated 750 youth will take an exam.
 - At the time of testing, students will be introduced to ARRL member benefit and scholarship opportunities and offered the opportunity to become members at the student rate.
 - Teachers of students testing will be introduced to ARRL member benefits and the ARRL Teacher program and offered the opportunity to become members.

IARU Region 2 Education Efforts

Steve Goodgame K5ATA will continue to serve as the IARU Region 2 Youth Coordinator. Youth in a large portion of Region 2 do not have the opportunity to engage with amateur radio. Training and mentoring of teachers and volunteers in the region is critical to help make amateur radio a part of rising STEM programs, thus exposing students to radio and wireless technology.

Because a significant number of the IARU member societies in Region 2 are Spanish speaking countries, ARRL Education and Learning is partnering with volunteers in those countries to provide educational materials in Spanish. Content that is currently on the ARRL Learning Center in English is being refilmed by these volunteers to provide Spanish speakers with an authentic learning experience in their native language.

Public Relations and Outreach Sierra Harrop, Public Relations and Outreach Manager

Overview

The mission of Public Relations and Outreach is to (1) increase the awareness and value of the Amateur Radio Service to the public at large, (2) to promote the value of ARRL and the contributions of its member-volunteers, and to (3) develop outreach opportunities that support awareness and growth of Amateur Radio and ARRL.

The ARRL News, The ARRL Letter, ARRL Audio News, and ARRL Social Media channels are within the Public Relations and Outreach Department. This structure ensures coordination with organization-wide content strategy and comprehensive data analytics to help our marketing team make better decisions related to audience, messaging, and distribution methods.

2024 Goals

The following is a summary of department goals.

<u>Increased outreach efforts.</u> The goal will be to inform the general public, and especially influencers and decision-makers about the relevance, importance, and significance of amateur radio. Thought leaders in positions of power will be informed about the resources radio amateurs provide to their local communities, and the nation.

<u>Evolve and continue to implement a public relations strategy</u> that builds a positive public image for Amateur Radio and ARRL. Create and schedule effective PR and media campaigns for traditional media (print, broadcast, online) and social media. Use suite of media monitoring tools to measure impact and effectiveness.

Refine and adapt social media strategy to evolving consumer tastes. This includes planning and publishing ARRL's social media posts, monitoring and measuring each of social media outlets, and engaging all ARRL business units and program areas in the same. Of key interest is driving traffic to ARRL websites and across multiple publishing channels (cross-channel marketing). Metrics are used to determine the success and return on investment (ROI) of social media efforts.

<u>Develop and empower member-volunteers</u> to extend the effectiveness and reach of ARRL's PR and outreach messaging and materials in the field. ARRL has 52 Section-appointed Public Information Coordinators (PICs) and 392 Public Information Officers (PIOs). The training resources for these key volunteers are being re-worked at the time of this report (September 2023) to improve the onboarding and continual support. There will be focus on creating even more tools and training to support and develop these volunteers through online resources and courses, and webinars.

Ensure that each ARRL Section has a functioning PIC. Efforts will be made to work with ARRL Section Managers to foster volunteer talent, ensuring that each section have a dedicated PIC by the end of 2024. This critical element of the ARRL Field Organization, prescribed in the organizational structure, is missing from 19 of the 71 ARRL Sections - including in some of the

country's top media markets. This will increase the measurable Ad Value Equivalence (AVE) of earned media in these sections.

<u>Implement an outreach strategy</u> and interface with volunteers conducting outreach and recruitment for Amateur Radio. ARRL relies on having a healthy pool of new entrants to Amateur Radio to increase our membership. This includes reaching out to communities and avocations whose members may be interested in the wide variety of Amateur Radio activities, experiences, and opportunities.

<u>Support license training and "bootcamp" efforts</u> as an ARRL product. We are adapting a model which has demonstrated success in increasing membership of a well-known Amateur Radio club. Supporting the adaptation and scaling of this model to a national presence is a project currently underway and expected to continue into the future.

Outreach goals include:

- producing messaging and materials for general recruitment,
- providing thought influencers who have expressed interest in Amateur Radio with copies of *The ARRL Ham Radio License Manual*, and doing all we can to foster their interest.
- providing material support for license training content, ham bootcamp content, and
- engaging with likeminded communities and groups with overlapping interests.

Areas of focus may include outdoor recreation enthusiasts, current GMRS users, technologists, and youth. We are also examining opportunities to increase the visibility of Amateur Radio and ARRL among organizations and communities promoting STEM education by leveraging our Teachers Institute on Wireless Technology, ARISS, ARRL Foundation scholarships, Collegiate Amateur Radio Program, and instructional resources.

Ongoing Activities

<u>Supporting external public relations</u>, including media outreach and following-up on press inquiries. Included is rapid response to breaking news stories, crisis management, and writing statements on behalf of senior leaders.

<u>Curating media hits and media mentions</u> to maximize exposure for positive messaging that raises the awareness and visibility of ARRL and Amateur Radio, both internally and externally. This effort also furthers ARRL's legislative and advocacy goals. Each week, the ARRL Letter includes a feature supported by this work; "Amateur Radio in the News."

Increasing our engagement using video. We are updating the capabilities of the ARRL Media Center to create more video content efficiently. The recent addition of video elements to our existing audio podcasts has demonstrated a need to have a better-suited facility in which to create content. We are planning a new video interview show and are experimenting with Artificial Intelligence (AI) based video editing tools to create targeted social media clips out of long form content. We also want to create videos that engage and motivate members and prospective members across a wide variety of Amateur Radio topics and interest areas. This effort has been bolstered by skills developed by the Social Media Specialist and by the Public Relations and

Outreach Manager joining ARRL, who has significant experience in television and video production. The capital plan seeks business tools to enable this increased and enhanced output.

Providing interface with the Public Relations Committee (PRC)

The PRC is an ARRL ad-hoc committee whose members are appointed by the President. The mission of the PRC is to recommend strategies for promoting Amateur Radio, for attracting new hams, and for recruiting and retaining ARRL members. The PRC is chaired by the Public Relations and Outreach Manager. The PRC is also responsible for recommending the annual PR/media awards: the ARRL Philip J. McGan Memorial Silver Antenna Award for volunteer public relations, and the ARRL Bill Leonard Award for professional journalism.

Of particular interest for 2024 is to work with the PRC to refresh and modernize the training and tools available to Public Information Coordinators and Public Information Officers.

Lab

George Spatta, Lab Manager

MISSION STATEMENT

The ARRL Lab provides ARRL members and the Amateur Radio community with technical information services, trusted product-review testing, spectrum-protection engineering, professional industry contact and a comprehensive RFI/EMC program.

STAFFING

The Lab is seeking to fill 2 positions. New hires will ideally be one engineer and one senior engineer position with digital radio / programming expertise. As these positions are difficult to fill, ARRL will hire qualified candidate into the appropriate job level.

MAJOR ACTIVITIES AND PROJECTS

- Product Review testing
- ARRL C.S.I. (Clean Signal Initiative)
- Other support of publications
- Technical Information Service, Technology web pages
- RFI Program
- Support of ARRL spectrum-protection activities
- IEEE and Other Industry Contact
- Promote the use of high-speed digital networking within Amateur Radio (AREDN)
- ARRL Board Committees

DESCRIPTIONS OF EACH MAJOR ACTIVITY OR PROJECT

Product Review Testing

The Lab expects to test approximately 25 pieces of equipment for Product Review in 2024. A typical multi-band, multi-mode HF through VHF (and up) transceiver may take as much as 10 days of testing, with some units requiring some re-testing due to problems discovered during the review process. Most of the smaller units take one to three days of testing time. The Product Review testing program also requires interfacing with the Product Review editor, the individual doing the review and sometimes significant time is spent working with a manufacturer to help resolve technical deficiencies encountered during the review.

ARRL C.S.I.

The Lab will continue to spearhead the C.S.I. program which is focused on creating a package of industry standard specifications, following the I.E.E.E. format, we hope manufacturers will endeavor to meet which will improve the transmit signal quality of their products. Lab staff and Director Mike Ritz, alongside independent technical experts and representatives from major manufacturers will continue to work together to identify common problems with transmitted

signals and propose objectives and metrics based on the best performing examples of the current state of the art. To date, the C.S.I. working group has recommended and voted on masks for CW bandwidth, IMD, and Composite Noise. The working group is planning to have the specification finalized and ready to roll out in early 2024.

Other support of Publications

The Lab will continue to review ARRL publications. This is done on an as-needed and as-requested basis. The Lab also reviews the technical content of all advertisements that appear in ARRL publications and assists the Advertising Department as needed.

Technical Information Service (TIS) and the Technology web pages

The Lab responds to member's technical inquiries by phone call, email, or letter. Throughout 2024, Lab staff will continue to make incremental changes to the Technology pages. This work will focus on updating and reorganizing the current pages.

As requested, the ARRL Lab will support the creation of videos, podcasts, and webinars. The Lab will attend conventions virtually as necessary. This will be coordinated with the Member Contact and ARRL Learning Network programs.

RFI Program

There are six areas of significant concern that will continue to be addressed in 2024:

- Interference from power lines and other noisy electrical devices.
- Identification of noisy devices and formal FCC complaints.
- Solar Power.
- Noise studies.
- Wireless Power Transfer and Electric-Vehicle Charging.
- Individual responses to help members with interference problems.

Interference from power lines and other noisy electrical devices

Power-line cases continue to dominate the ARRL's RFI work. The Lab will continue to work directly with Laura Smith and other FCC enforcement personnel, under the scope of our informal agreement with the FCC on the resolution of power-line noise cases.

Identification of noisy devices and formal FCC complaints

In response to interference reports, the Lab is continuing to identify and test various noisy devices. These cases are either handled as a harmful interference complaint or, if devices exceed the FCC noise limits, a formal complaint to FCC is initiated. This will be ongoing throughout 2024, driven by complaints, opportunity, and the identification of noisy devices.

Solar power

ARRL has continued to receive complaints of interference from solar-power installations. At this time, Solar Edge, Enphase and Generac constitute the majority of the complaints. Solar Edge has retrofitted hundreds of systems across the country, resolving most, but not all of the noise from its systems. ARRL is continuing to work with vendors to improve the noise performance of their systems. This work will continue in 2024 as part of the Lab's ongoing work with manufacturers to improve the design of consumer products.

Noise studies

There is an increased interest in knowing more about the impact of noise on radio communications. Both the FCC and ITU have been looking at various ways to determine whether noise levels have changed or are changing. In 2024, the Lab will continue this process and will analyze the studies to determine how they can be compared to create a timeline of the changes in noise levels over time. This will be done with Lab staff and external volunteers.

The Lab and volunteers will also continue to make drive-around measurements of noise levels across a relatively large geographical area. ARRL will seek to have some of these results published in IEEE peer-reviewed journals, adding to the body of knowledge about man-made radio noise.

Wireless power transfer and electric-vehicle charging

There are two major classes of wireless-power transfer (WPT) devices available. One type includes small wireless "pad" chargers used to charge some cell phones. These typically operate at low power and have not posed any specific interference problems to Amateur Radio. WPT chargers are also being developed for use in charging automotive electric vehicles (EVs). These may operate at power levels of up to 20 kW in residential environments and greater than 100 kW for some commercial installations. Evaluation in 2021 by the Lab staff and IARU volunteers indicates that these pose a significant interference to Amateur Radio. Driven by regulatory activities in this area and industry opportunities, Lab staff and volunteers will continue to investigate RFI issues related to WPT. In 2024, the Lab will support ARRL international activities related to protecting Amateur Radio against possible WPT-device interference.

Individual responses to help members with interference problems

Helping members with RFI problems will continue to be the "lion's share" of the Lab's work. This ranges from answering questions about RFI to actual RFI cases to helping forward cases to the FCC for further action. This is an ongoing responsibility of the Lab that is expected to continue at its present levels into the future.

Support of ARRL Spectrum-Protection Activities

In addition to its RFI programs and ARRL involvement with industry standards and industry contact, as needed, the ARRL Lab will respond to various regulatory and other threats that may arise during 2024. Although it is not possible to predict the exact nature of various FCC and other

regulatory threats, the Lab will continue its historical precedent of generating engineering studies and/or measurements as requested to support ARRL's responses to FCC rulemaking actions.

IEEE and Other Industry Contact

The Lab staff will continue to improve ARRL's relationship with the industry, in areas ranging from local Section and Regional participation to EMC. Steve Anderson, W1EMI, will participate in IEEE standards meetings of the IEEE EMC Society Standards Development and Education Committee (SDECom). Our participation in the IEEE and the EMC Society adds significantly to the credibility of Amateur Radio and ARRL in its dealings with industry and regulators. SDECom oversees the development and maintenance of 31 IEEE standards on EMC, plus 6 other standards being co-sponsored with other IEEE Societies. Steve Anderson is also serving as the alternate on the ANSC C63 standards committee.

Promote the use of high-speed digital networking within Amateur Radio (AREDN)

The Lab will continue to work with the Amateur Radio Emergency Data Network (AREDN) project, with the goals of familiarizing ARRL staff with the technology behind mesh networking and its potential use in routine and emergency amateur communications and then helping to implement high-speed digital communication into routine and emergency amateur communications. In 2024, this project will be a major focus of one of the new positions we are seeking to fill, in collaboration with the Director of Emergency Management.

ARRL Board Committees

The Lab staff will continue to serve as staff liaison to the EMC, and RF Safety Committees.

Washington

Jon Siverling, Senior Technical Relations Specialist

ARRL Participation at International Meetings - 2024

The following international meetings will require ARRL participation in 2024.

- ITU-R Working Party 5A, 5C, 5D* and Study Group 5 (WP 5ACD, SG 5)
- ITU-R Working Party 1A, and Study Group 1 (WP 1A, SG1)
- ITU-R Working Party 4A and 4C
- ITU-R Radiocommunication Advisory Group (RAG)
- CITEL PCC.II

The amateur and amateur satellite services have to continuously defend Amateur Radio allocations and to avoid being blindsided at each step along the path toward a possible allocation action. The World Radiocommunication Conference (WRC) calendar drives the process.

The Radiocommunication Assembly 2023 (RA-23), World Radiocommunication Conference 2023 (WRC-23) and the First Session of the Conference Preparatory Meeting for WRC-27 (CPM27-1) will be held in Dubai at the end of 2023. These meetings will take decisions that will impact Amateur Radio. The issues which may impact Amateur Radio will be determined by the decisions taken by the WRC-23 as well as the future agenda items agreed for the next two WRCs (WRC-27 and WRC-31).

ITU-R Working Parties, ITU-R Study Group meetings, and the Inter-American Telecommunication Commission (CITEL) regional meetings will develop proposals for each WRC agenda item; some of which may impact Amateur Radio. ARRL will participate in these meetings to support proposals and views that benefit Amateur Radio and to oppose proposals and views which are harmful.



International Telecommunication Union (ITU)¹

The ITU World Radiocommunication Conference 2023 (WRC-23) and the Conference Preparatory Meeting 27-1 (November/December 2023) in Dubai will set the agenda and assign the work within the ITU for the World Radiocommunication Conference 2027 (WRC-27).

The WRC is held approximately every 4 years to discuss changes to the allocation of frequencies in the RF spectrum. Broadcasters, government agencies, satellite users, and emerging technology information providers all want a piece of this finite property. ARRL actively participates in many of these meetings in defense of Amateur Radio interests. Each issue is projected over years of domestic preparatory meetings and international meetings. Issues that may impact Amateur Radio at WRC-27 are as yet to be determined.

ITU-R Radiocommunication Advisory Group (RAG)

The Radiocommunication Advisory Group (RAG) is tasked to:

- review the priorities and strategies adopted in the Sector;
- provide guidance for the work of the Study Groups
- recommend measures to foster cooperation and coordination with other organizations and with the other ITU Sectors.

The RAG provides advice on these matters to the Director of the Radiocommunication Bureau. The RAG provides an overview of all of the ITU-R groups and allows for an "early warning" of possible issues that may impact Amateur Radio from groups where we do not participate on a regular basis.

ITU-R Study Group 5 (SG 5)

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- ♦ Radiocommunication Advisory Group (RAG), advises the Director on management of the radio sector
- ♦ Study Group 1 (spectrum management and monitoring), also its Working Parties 1A (spectrum engineering), 1B (spectrum administration) and 1C (Spectrum Monitoring)
- ♦ Study Group 4 (satellite services), systems and networks for the fixed-satellite service, mobile-satellite service, broadcasting-satellite service and radiodetermination-satellite service
- Study Group 5 (Terrestrial Services Systems and networks for fixed, mobile, radiodetermination, amateur and amateur-satellite services.)
- ♦ WRC-27 Inter Regional Preparatory Meetings
- ♦ WRC-27 Conference Preparatory Meetings (CPM)

¹ ITU-R groups in which we participate:

(Terrestrial Services - Systems and networks for fixed, mobile, radiodetermination, amateur and amateur-satellite services.)

Four Working Parties (WPs) carry out the studies on Questions assigned to Study Group (SG) 5 and conduct studies to prepare for WRC-27.

ITU-R Working Party 5A (WP 5A)

(Land mobile service excluding IMT; amateur and amateur-satellite service)

Working Party 5A is the "home" for the Amateur Radio Services within ITU-R Study Groups. WP 5A meets between five to ten working days, twice each year; SG 5 meets for two days typically. Internationally, WP 5A is divided into smaller groups - key to us is WG 5A – 1 (Amateur Services). ARRL also participates in other meetings to learn who may be interested in our frequencies and to keep abreast of new technologies. WRC-23 will assign future agenda items/issues to WP 5A. Jon Siverling (USA/ARRL) is the Alternate Chairman, Working Group 5A-1 Amateur and Amateur Satellite Services.

ITU-R Working Party 5B (WP 5B)

(Maritime mobile service including the Global Maritime Distress and Safety System - GMDSS; the aeronautical mobile service and the radiodetermination service)

WP 5B is responsible for studies related to the maritime mobile service, including the Global Maritime Distress and Safety System (GMDSS), the aeronautical mobile service and the radiodetermination service, including both radiolocation and radionavigation services. It studies communication systems for the maritime mobile and aeronautical mobile services and radar and radiolocation systems for the radiodetermination service.

ITU-R Working Party 5C (WP 5C)

(Fixed wireless systems; HF systems in the fixed and land mobile services)

WP 5C is responsible for studies related to fixed wireless systems and HF systems in the fixed and land mobile services. It studies performance and availability objectives, interference criteria, RF channel/block arrangements, system characteristics and sharing feasibility.

ITU-R Working Party 5D (WP 5D) - IMT Systems

Working Party 5D is responsible for the overall radio system aspects of International Mobile Telecommunications Systems (IMT). Future work within WP 5D on International Mobile Telecommunications (IMT) depends upon the decisions taken at WRC-23 regarding agenda item 1.2.

ITU-R Study Group 1 (SG 1)

(Spectrum Management)

Spectrum management principles and techniques, general principles of sharing, spectrum monitoring, long-term strategies for spectrum utilization, economic approaches to national spectrum management, automated techniques and assistance to developing countries in cooperation with the Telecommunication Development Sector.) Three Working Parties (WPs) carry out studies on Questions assigned to Study Group (SG) 1:

WP 1A Spectrum engineering techniques

WP 1B Spectrum management methodologies and economic strategies

WP 1C Spectrum monitoring

The goals of ITU-R Working Parties 1A, 1B and 1C activities are to develop and maintain ITU-R Recommendations, Reports and Handbooks relevant to spectrum engineering techniques, spectrum management fundamentals and spectrum monitoring, respectively. Potential impact to Amateur Radio in these working parties include continued work on Wireless Power Transmission (WPT), both for Electric Vehicles and for mobile devices, and photovoltaics.

ITU-R Working Party 1A (WP 1A) (Spectrum engineering techniques)

Spectrum engineering techniques, including unwanted emissions, frequency tolerance, technical aspects of sharing, spectrum engineering, computer programs, technical definitions, Earth-station coordination areas and technical spectrum efficiency. Working Party 1A also addresses bands from 275 GHz and above.

Issues that impact Amateur Radio in WP 1A include Wireless Power Transmission (WPT), the coexistence of telecommunication systems with wires and radiocommunication systems and related matters, including power line telecommunications (PLT) and smart grids. Updating of: Report ITU-R SM.2451, Assessment of impact of wireless transmission for electric vehicle charging on radiocommunication services.

Question ITU-R 210-3/1 addresses "Wireless power transmission (WPT) and related issues" (WP1A and WP1B).

ITU-R Working Party 1B (WP 1B)

(Spectrum management methodologies and economic strategies) Spectrum management fundamentals, including economic strategies, spectrum management methodology, national spectrum management organization, national and international regulatory framework, alternative approaches, flexible allocations and long-term strategies for planning.

ITU-R Working Party 1C (WP 1C) (Spectrum Monitoring)

Spectrum monitoring, including the development of techniques for observing the use of the spectrum, measurements techniques, inspection of radio stations, identification of emissions and location of interference sources.

ITU-R Study Group 4 (SG 4) (Satellite Services)

Systems and networks for the fixed-satellite service, mobile-satellite service, broadcasting-satellite service and radiodetermination-satellite service.

ITU-R Working Party 4A (WP 4A) - Efficient orbit/spectrum utilization for the fixed-satellite service (FSS) and broadcasting-satellite service (BSS)

WP 4A will continue to develop a Small Satellite Handbook. Dr. Ali Ebadi (Malaysia) is the editor.

ITU-R Working Party 4B (WP 4B) - Systems, air interfaces, performance and availability objectives for the fixed-satellite service (FSS), broadcasting- satellite service (BSS) and mobile-satellite service (MSS), including IP-based applications and satellite news gathering (SNG)

Working Party 4B carries out studies on performance, availability, air interfaces and earth-station equipment of satellite systems in the FSS, BSS and MSS.

ITU-R Working Party 4C (WP 4C) (Spectrum Monitoring)

Working Party 4C – Efficient orbit/spectrum utilization for the mobile-satellite service (MSS) and the radiodetermination-satellite service (RDSS)

For WRC-27, it remains possible that WP 4C will have additional work regarding the WRC-23 agenda "topic" 9.1 b (1240 – 1300 MHz band. This will be determined by WRC-23.



Inter-American Telecommunication Commission $(CITEL)^2$

CITEL PCC.II (radiocommunications including broadcasting) mirrors the ITU Plenipotentiary Conference, CPM and WRC-23 preparations

CITEL Assembly

The CITEL Assembly is the highest body of the Inter American Telecommunication Commission and meets every four years. The Assembly determines the structure of CITEL and elect Chairs for each body.

Permanent Consultative Committee – I

(Telecommunications/Information and Communication Technologies) (PCC.I)

Permanent Consultative Committee I (PCC.I) serves as the advisory body of CITEL in the area of telecommunications/ICTs, especially with regard to matters of telecommunication/ICT policy, regulatory aspects, standardization, cybersecurity, international Internet-related public policy matters—insofar as those matters involve telecommunication networks or ICT infrastructure—, universal service, economic and social development, environment and climate change, infrastructure development, and new technologies.

♦ COM/CITEL, its executive committee, usually meets annually

² CITEL is the regional telecom organization for the Americas, part of the Organization of American States (OAS), with secretariat in Washington, DC

[♦] Jon Siverling participates in CITEL as a member of the US Delegation

[•] IARU Region 2 is a recognized observer, usually represented by an Area Director

[♦] The CITEL Assembly is the highest body

[◆] Permanent Consultative Committee I (Telecommunications/Information and Communication Technologies) (PCC.I) meets 2 or 3 times annually

[♦] Permanent Consultative Committee II (Radiocommunications) (PCC.II) meets twice annually; three times in years with a World Radiocommunication Conference

Permanent Consultative Committee – II (Radiocommunications) (PCC.II)

The CITEL Permanent Consultative Committee II: Radiocommunications (PCC.II) typically meets twice each year. Impact to Amateur Radio: *all* Americas regional proposals for WRC-27 will be developed in PCC.II.

CITEL Working Group to Prepare for the ITU Conferences

The CITEL Working Group to Prepare for Conferences is the responsible group to prepare Inter American Proposals (IAPs) for World Conferences, to include World Radiocommunication Conferences, World Telecommunication Development Conferences, and the Plenipotentiary. This is where consensus is reached on agenda items which are then submitted to the ITU as regional proposals. Impact to Amateur Radio: formation of positions and proposals for the Americas region are developed here. Once regional consensus is reached for each agenda item, the Inter American Proposal (IAP) is sent to the ITU. Proposals that favor Amateur Radio positions must be developed in this Working Group and support developed for favorable proposals sought from Member States throughout the process leading up to world conferences.