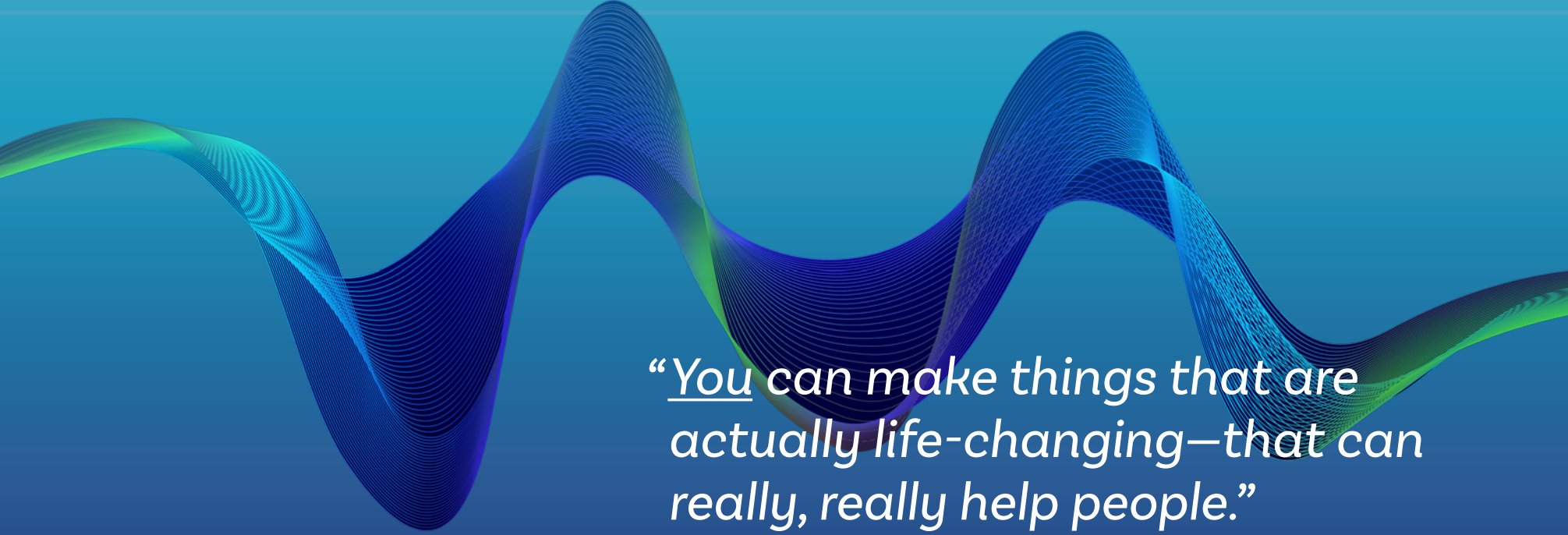


# Annual Report

2020-2021



*“You can make things that are actually life-changing—that can really, really help people.”*

— NEIL DESHMUKH, DVSF ALUMNI

## DEAR FRIENDS,

Since the COVID-19 pandemic began, our resilience, motivation, work ethic, creativity, determination, and empathy have been put to the test as we approach new personal and professional challenges and opportunities in our everyday lives. We, as a society, have been tasked with changing our schedules, our social norms and our relationships with family, friends, and colleagues.

Through preparing for and presenting at science and engineering research competitions in their schools, at their local fairs, and at DVSF's regional event (all virtually over the past year), students develop critical skills that help them manage their daily lives more effectively, respond and adapt more positively to change, failure, and success, and – ultimately – become engaged and contributing members of their communities.

Students who participate in science and engineering fairs are encouraged by teachers and mentors to think differently, observe, question, hypothesize, experiment, analyze, and react to their learnings. These skills serve our students well in their personal and academic lives and they are shining bright through the constantly changing home and school environments.

In our Annual Report, we highlight DVSF's programs and activities over the past fiscal year (July 1, 2020 – June 30, 2021) and just a few of the incredible students and STEM educators we support and serve through year-round initiatives.

Sincerely,



**Bob Solomon**

DVSF President & Executive Director

# CREATIVITY

*resilience*

*motivation*

→ **At Delaware Valley Science Fairs (DVSF), we deeply believe our work in inquiry-based, hands-on STEM education helps prepare youth for these extraordinary times by creating opportunities and pathways for students to develop skills, competencies, and characteristics that are not taught in the classroom and cannot be measured by standardized test.**

# DETERMINATION

*work ethic*

# A Year of Transition

## Leadership Changes at DVSF

After 32 years of faithful and tireless leadership, Henry Disston retired as President and Executive Director of the Delaware Valley Science Fairs, Inc. on June 30, 2021. And after serving DVSF with great distinction for 24 years consecutively from 1997 through June 2021, Mickey Disston retired as the Director of Special Awards and Volunteers.

**Through Henry and Mickey's exceptional stewardship, DVSF became nationally and internationally recognized as a leader in promoting experiential STEM education.**

Effective July 1, 2021, DVSF announced Dr. Robert Solomon as the new President and Executive Director. Bob retired from the Dow Chemical Company after 34 years in Research and Development to take on this role. While Bob's official tenure with the organization began on July 1st, he has served on the DVSF Board of Trustees for 13 years and has been a judge in the fair for over 20 years.

In addition, DVSF's management team was restructured with John Disston serving as the Director of Operations and Mary-Rita Bonner serving as the Director of Awards and Scholarships.

### **Henry Disston remains a key resource for DVSF in emeritus status.**

He will also continue his work with the Society for Science (formerly known as the Society for Science & the Public) and stay on the Society's Scientific Review Committee for the Regeneration International Science and Engineering Fair (ISEF).

**The newly structured management team is dedicated to continuing the exceptional tradition of the organization and regional fairs.** We aim to build on past achievements and launch the untapped potential of future generations of students. Our goal is to reach out to every community and inspire the next generation of scientists, engineers, and technologists.

# DVSF Mission & Overview

Inspiring future  
leaders and  
innovators

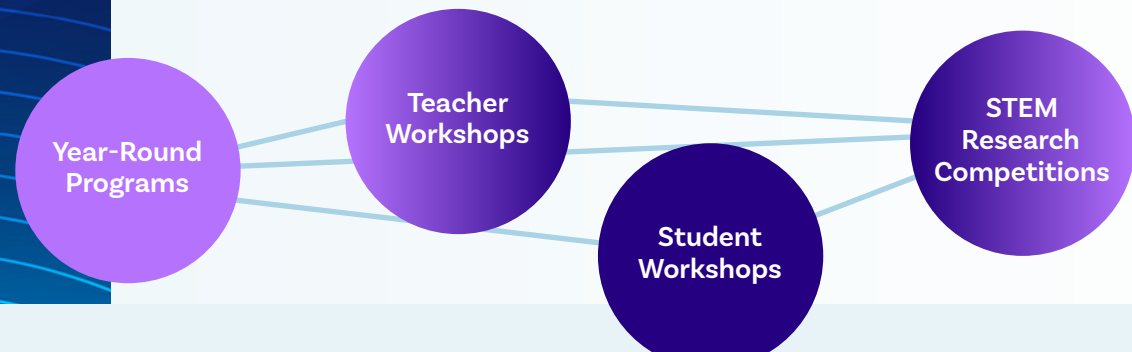
AND

supporting  
STEM teachers  
in Eastern  
Pennsylvania,  
Delaware,  
and Southern  
New Jersey.

Founded in 1949, DVSF strives to bring parents, teachers, and industry together to stimulate and nurture young people so that they grow and develop into contributing members of the community.

DVSF, a 501(c)3 organization, enables students in middle and high schools to *develop a love of science, create interest in STEM* at this stage in their lives, *gain confidence* and, finally, move into careers in STEM disciplines. DVSF's year-round programs – including teacher workshops, student workshops, and one of the largest science and engineering research competitions in the United States – provide opportunities to inspire the next generation of innovators and support 6th-12th grade students, mentors, and STEM educators in Eastern Pennsylvania, Delaware, and Southern New Jersey.

DVSF provides a *platform for inquiry-based learning*, the pursuit of answers, and the acquisition of new skills, serving thousands of young scientists, technologists, engineers, and mathematicians from all social and economic backgrounds. The philosophy behind our programs is that students *learn science by doing science*.



**“Tell me and I forget,  
teach me and I may  
remember, involve me  
and I learn.””**

**– BENJAMIN FRANKLIN**

# Key Activities

## LOCAL FAIRS

DVSF supports 13 “local” fairs and provides expert guidance related to strategic planning, student project review, fair organization, and other resources as needed.

DVSF is able to provide financial resources each year to these local fairs as a result of generous contributions given to DVSF. And DVSF organizes and hosts an Advisory Board, which is composed of local fair directors and other school and agency leadership to share ideas, develop coordinated plans, and learn from one another related to fair administration and technologies. Students who compete and win at these local fairs earn the opportunity to advance to DVSF’s regional event.

260  
teachers

1,519  
6th-12th grade  
students

191  
schools

participated in science and  
engineering fairs in PA, DE, and NJ  
(2021)

## STUDENT SPOTLIGHT



**Maria Hromcenco  
& Cassandra Hung**

**Award | 2021**

**TEAM MEDALISTS |** Pennsylvania  
Leadership Charter School

**CATEGORY:** Biomedical and Health  
Sciences

**PROJECT:** *Effects of Grape Seed Extract  
(GSE) Consumption on Egg Production in  
Drosophila melanogaster Adults*

# DVSF SCIENCE AND ENGINEERING RESEARCH COMPETITIONS

Students who win in their local fairs earn the right to compete at the annual Delaware Valley Science Fair that is comprised of five research competitions, including a fair each for 6th-8th grades, 9th grade, 10th grade, 11th grade, and 12th grade.

Individual students choose research projects from 14 STEM disciplines, including:

- behavioral/ social sciences
- biochemistry
- botany
- chemistry
- computer sciences
- consumer sciences
- earth/space sciences
- engineering
- environmental
- mathematics
- medicine/ health
- microbiology
- physics
- zoology

Students may also enter DVSF's event as a team of two to three students. These teams compete in a separate category with one another and may present projects from the aforementioned STEM disciplines. At the regional level, students' topics and methodology are reviewed by the DVSF Scientific Review Committee to guarantee proper scientific safety procedures and federal guidelines are being followed.

*The judging process is key, as students will receive valuable feedback and project evaluations from industry experts. This input is essential for students to continue their research or in helping students redefine their research for a future project.*

## STUDENT SPOTLIGHT



### Yash Prabhu

**Gold Medalist | 2021**

**GRADE 10 | North Penn High School**

**CATEGORY: Computer Science**

**PROJECT TITLE: Autonomous COVID-19 Screening Using Deep Learning and Low Cost Thermal Imaging.**

**775** students presented **740** research projects at the 2021 Virtual DVSF Science and Engineering Research Competition

**407** volunteer judges participated in the 2021 DVSF Virtual Fair

# Broadcom MASTERS®

Math, Applied Science, Technology and Engineering for Rising Stars



Broadcom MASTERS®, a program founded and produced by the Society for Science, seeks to inspire young scientists, engineers, and innovators who will solve the grand challenges of the future.

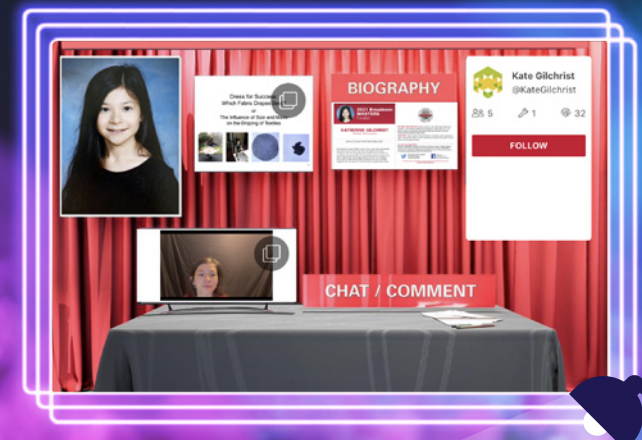
Broadcom MASTERS® is the only middle school STEM competition that leverages Society-affiliated science fairs as a critical component of the STEM talent pipeline. DVSF is a part of that pipeline, and 13 of our top middle-school projects were selected as Top 300 MASTERS, who were selected from 1,841 students from 48 states, Washington, DC, and three US territories (Puerto Rico, Guam and Virgin Islands).

# 44

**middle school students**

(6th-8th grade) advanced to the  
2021 Broadcom MASTERS®

## STUDENT SPOTLIGHT



## Katherine Gilchrist

**Broadcom MASTERS Finalist  
Top 30 | 2021**

**GRADE 7 |** Orefield Middle School

**CATEGORY:** Consumer Sciences

**PROJECT:** *Dress for Success:  
Which Fabric Drapes Best?*

Katherine earned the opportunity of competing in Broadcom MASTERS by winning First Place in the Consumer Sciences category at the 2021 Delaware Valley Science Fairs E Fair – 6th through 8th grades.



# Regeneron ISEF

International Science and Engineering Fair



All 9th-12th grade DVSF medal winners earn an all-expense paid trip to the Regeneron International Science and Engineering Fair (ISEF), organized by the Society for Science.

In 2021, the international competition was held virtually but provided an incredibly unique experience for students who participated. Student researchers representing DVSF competed against approximately 1,850 young scientists selected from 422 affiliate fairs held in more than 81 countries, regions, and territories.

# 14

high school DVSF medalists competed for awards, prizes, and scholarships in the 2021 Virtual Regeneron ISEF

## STUDENT SPOTLIGHT



## Arya Tschand

**\$10,000 Craig R. Barrett Award for Innovation**  
**\$5,000 First Place Grand Prize**

GRADE 12 | High Technology High School, NJ

CATEGORY: Engineering Mechanics

PROJECT: *Implementation of Novel Semi-Supervised Machine Learning Model into Autonomous Irrigation Network Optimized for Power-Self Sufficiency*



## STUDENT SPOTLIGHT

REGENERON  
**ISEF**  
A PROGRAM OF  
SOCIETY FOR SCIENCE & THE PUBLIC  
VIRTUAL | 2021

# DVSF Medalists Win Top Prizes!



**Maya Butani**

---

**\$5,000 First Place  
Grand Prize**

---

**GRADE 12 |** Moorestown High  
School, NJ

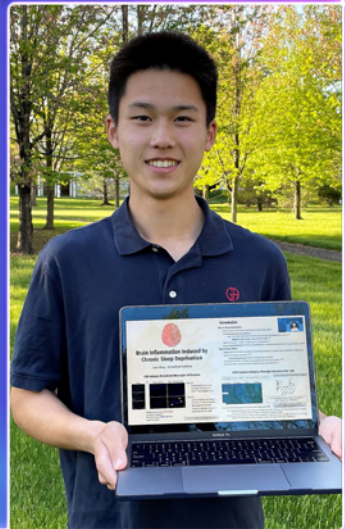
---

**CATEGORY:** Biochemistry

---

**PROJECT:** *Stem Cell Behavior  
and Osteogenic Differentiation on  
Plant-Derived Scaffolds*

---



**Jason Wang**

---

**\$2,000 Second Place  
Grand Prize**

---

**GRADE 11 |** Germantown Academy, PA

---

**CATEGORY:** Microbiology

---

**PROJECT:** *Chronic Sleep Deprivation  
Induces Brain Inflammation via CCR2-  
mediated Peripheral Monocyte Infiltration*

---

*The 2021 Regeneron  
International Science and  
Engineering Fair (ISEF) was  
a fair to remember!*

*Our medalists represented  
DVSF well and brought  
home some top prizes.*

# Year-Round Resources

## Mentorship Program

DVSF's community of mentors—comprised of parents, teachers, and sponsors—are available to advise and support students on an individual basis. The Mentorship Program is designed to give students access to more technical expertise, equipment, and guidance on developing safe procedures.

> [Learn more about the Mentorship Program](#)

## DVSF Science Fair Workshops

Delaware Valley Science Fairs offers free science workshops to teachers and students on a wide variety of topics, from getting started in understanding inquiry and its application to student science research (science fairs!) to forming testable, investigatable questions to setting up a project for statistical analysis and appealing to judges.

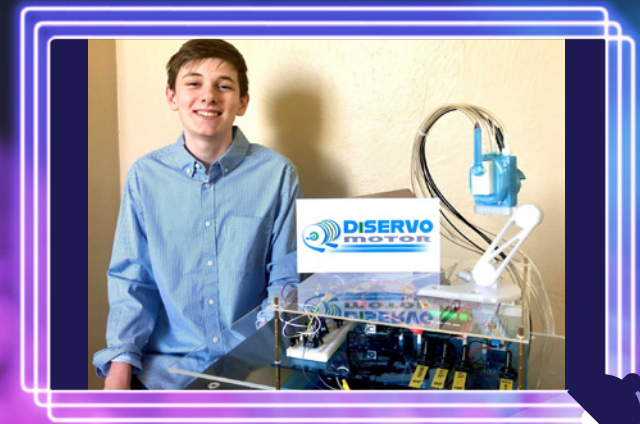
> [Learn more about teacher and student workshops](#)

## Alumni Engagement

DVSF hosts virtual panel discussions and special networking events and coordinates volunteer opportunities for alumni to share their insights on various topics, often centered on science fair research in the real world, and to stay engaged with DVSF.

> [Access the library of alumni panels on Youtube](#)

## STUDENT SPOTLIGHT



## Leo Wylonis

**4th Place Grand Prize  
2021 Regeneron ISEF**

**GRADE 11 | Conestoga High School, PA**

**CATEGORY: Engineering**

**PROJECT: Novel Fully MRI Compatible Nonmagnetic and Dielectric Pneumatic Servo Motor for MRI Guided Surgical Robotics**

# FY2021 Supporters

## Program Year 2020-21 Supporters

Charitable donations to DVSF are 100% tax deductible and provide meaningful support to enrich and sustain DVSF programs in Eastern Pennsylvania, Delaware, and Southern New Jersey. DVSF gratefully acknowledges its supporters. *List updated August 2021.*

### Major Gift Contributors (\$10,000+)

- Botstiber Foundation
- Bullpen Capital
- Corteva Agriscience
- Dow
- DuPont
- Exelon Generation
- FMC Corporation
- Insaco, Inc.
- Janssen Research & Development
- Universal Display Corporation (OLED)
- USciences
- West Pharmaceutical Services, Inc.

### Sustaining Donors (\$5,000 - \$9,999)

- Bristol Myers Squibb Foundation
- Endo Pharmaceuticals
- Lockheed Martin Space
- Pfizer

### Contributors (\$1,000 - \$4,999)

- Broadcom Foundation
- Countryside Consulting
- Susan Frey and Dr. William Studt
- Harrisburg University of Science and Technology
- Craig Hiller
- John and Marie Cwik Family Foundation
- Dr. & Mrs. Gerald Liebling
- Merck
- Gerald D. Quill
- Fred & Susan Thompson

### Friends of DVSF

Supporting DVSF with gifts of \$100 and above, a complete list of Friends of DVSF is located at [DVSF.org](https://www.dvsf.org).

# FY2021 Trustees List

## Board of Trustees, 2020-21

### Officers

Paul Martino, Bullpen Capital, Chairman

Henry Disston, DVSF, President & Executive Director

Louise S. Smith, Countryside Consulting, Inc., Treasurer

Bob Solomon, Ph.D., DVSF, Vice President & Incoming Executive Director

### Trustees

- Steven V. Abramson, Universal Display Corporation (OLED)
- Richard Close, Retired School Teacher
- Mark DiRado, Exelon Generation
- Debra Dunne, Attorney
- Susan Frey, Retired from Pfizer, Inc.
- Louis L. Hegyes, Rosemont College
- Linda Higginbotham, GlaxoSmithKline (GSK)
- Ambra Hook, STEM Educational Consultant
- Robert Hranek, Peraton Engineering
- Yvonne Klemets Wright, YKWright Consulting
- Joseph Maglaty, Ph.D., Retired from Dow
- Allen P. Marks, Ph.D., Retired from Rohm & Haas Company
- Peter Miller, Ph.D., Thomas Jefferson University
- Steven C. Pomerantz, Ph.D., Janssen R&D
- Vojislava Pophristic, Ph.D., Rowan University
- Gerald D. Quill, Retired from East River Bank
- Raymond W. Sweet, Ph.D., Retired from Janssen R&D
- Patti Taylor, SAP America, Inc.
- Evelyn K. Thimba, Drexel University
- A. Frederick Thompson, Ph.D., P.E., Retired from Roy F. Weston, Inc.

# Financial Snapshot

## Statements of Financial Position

June 30, 2021 and 2020

<b>ASSETS</b>	<b>2021</b>	<b>2020</b>
Cash	\$ 565,157	\$ 521,664
Contributions receivable	7,015	20,000
Prepaid expenses and other	30,916	30,916
Investments	497,997	437,957
<b>Total assets</b>	<b>\$ 1,101,085</b>	<b>\$ 1,010,537</b>
<b>LIABILITIES</b>		
Accounts payable and accrued expenses	\$ 28,464	\$ 23,798
<b>NET ASSETS</b>		
<i>Without donor restrictions</i>		
• Board designated for endowment purposes	431,060	334,905
• Undesignated	516,517	510,194
	947,577	845,099
<i>With donor restrictions</i>	125,044	141,640
<b>Total net assets</b>	<b>1,072,621</b>	<b>986,739</b>
<b>Total liabilities and net assets</b>	<b>\$ 1,101,085</b>	<b>\$ 1,010,537</b>

# Statements of Activities

Years ended June 30, 2021 and 2020

	2021			2020		
	Without Donor Restrictions	With Donor Restrictions	Total	Without Donor Restrictions	With Donor Restrictions	Total
<b>REVENUES AND SUPPORT</b>						
Contributions	\$ 247,756	\$ 13,000	\$ 260,756	\$ 185,550	\$ 56,900	\$ 242,450
Contributed goods and services	10,769	-	10,769	128,376	-	128,376
Investment income	98,132	4,593	102,725	25,313	977	26,290
Net assets released from restrictions	34,189	(34,189)	-	59,591	(59,591)	-
<b>Total revenues and support</b>	<b>390,846</b>	<b>(16,596)</b>	<b>374,250</b>	<b>398,830</b>	<b>(1,714)</b>	<b>397,116</b>
<b>EXPENSES</b>						
Programs	193,038	-	193,038	227,010	-	227,010
General and administrative	50,044	-	50,044	45,273	-	45,273
Fundraising	45,286	-	45,286	34,952	-	34,952
<b>Total expenses</b>	<b>288,368</b>	<b>-</b>	<b>288,368</b>	<b>307,235</b>	<b>-</b>	<b>307,235</b>
<b>Change in net assets</b>	<b>102,478</b>	<b>(16,596)</b>	<b>85,882</b>	<b>91,595</b>	<b>(1,714)</b>	<b>89,881</b>
<b>NET ASSETS</b>						
Beginning of year	845,099	141,640	986,739	753,504	143,354	896,858
<b>End of year</b>	<b>\$ 947,577</b>	<b>\$ 125,044</b>	<b>\$ 1,072,621</b>	<b>\$ 845,099</b>	<b>\$ 141,640</b>	<b>\$ 986,739</b>

*Inspiring future leaders and innovators and  
supporting STEM teachers in Eastern Pennsylvania,  
Delaware, and Southern New Jersey since 1949*



[dvsf.org](http://dvsf.org)

