

# HOW TO

## *Establish A Water Quality Equipment Loan Network*

IZAAK WALTON LEAGUE OF AMERICA





# THE CONCEPT

## WHAT IS AN EQUIPMENT LOAN NETWORK?

An equipment loan network is a group of locations that house water quality testing equipment. At these locations, volunteers can borrow supplies to use for water quality testing and return them when they are finished. This equipment may include supplies for chemical monitoring, biological monitoring, or both.

## WHAT IS THE PURPOSE?

Equipment loan programs make water quality monitoring accessible to a wider range of volunteers by removing financial and logistical barriers to participation. Equipment can be expensive! Allowing volunteers to share equipment removes the burden of purchasing one's own set of equipment. Moreover, chemical testing supplies don't have an unlimited shelf life. When volunteers purchase their own testing equipment, they may find it difficult to use all of their supplies before they expire. When volunteers share equipment there are typically less wasted supplies.



# THE PRECEDENT

## IOWA EQUIPMENT LOAN NETWORK

Since 2022, the Izaak Walton League of America has supported a network of equipment loan sites across Iowa. At these loan stations, volunteers can borrow chemical and biological Save Our Streams testing equipment at no cost. There are currently 13 equipment loan stations in Iowa, including Izaak Walton League Chapters, nature centers, and other partner organizations.

**Click to view** an updated map of these loan stations, including contact information for each site.



*The Iowa equipment loan program is supported by funding from the Iowa Department of Natural Resources Resource Enhancement and Protection Conservation Education Program (REAP CEP).*

# GETTING STARTED

To have a successful equipment loan program, you'll need the following pieces in place:

## **A NETWORK OF MONITORS**

Starting an equipment loan network only makes sense if there is a sizable network of volunteer water quality monitors to make use of the equipment. Begin by determining approximately how many volunteers are in your network and mapping out where they are located. This can help determine how many equipment loan stations are needed and how large of a region you will serve.

## **PARTNERS**

Partners are a key component of an equipment loan program. These are the organizations and/or individuals that will host equipment loan kits at their physical locations.

Each partner that hosts a kit should also identify a point of contact. This person will receive inquiries from volunteers requesting equipment and will communicate with the Coordinator when replacement supplies are needed.

## **A COORDINATOR**

Make sure to identify a coordinator for your equipment loan program. This person will be responsible for:

- Managing the logistics of establishing and sustaining equipment kits
- Maintaining an updated list of loan stations and points of contact
- Managing the acquisition and disbursement of funding for supplies
- Collect information about kit usage

## **FUNDING**

The cost of a full equipment kit can range from around \$500 to over \$1000 depending on what is included - see pages 5-7 for a price breakdown.

Remember that equipment kits are not a one-time expense. When equipment is used up, expires, or is damaged/lost, it must be replaced. Thus, equipment loan programs require recurring sources of funding.



# KEEPING IT GOING

Once your equipment loan network is in place, your work is not done! Continuous input is required to sustain your network of supplies.

The coordinator of your equipment loan network will be tasked with the following:

## **KEEP AN UPDATED LIST OF STATIONS & CONTACT INFO**

As equipment loan stations are added or removed, keep an updated list in a location that is easily accessible by volunteers. We recommend using a free service like [Google's "My Maps"](#) to create an interactive, customizable map indicating the location of your loan stations. This map can be shared with volunteers and/or embedded in a website.

If the point of contact for a loan station leaves their role, make sure that there is a plan in place to hand off their responsibilities to another team member.

## **MAINTAINING SUPPLIES**

When materials are used up, expired, or damaged/lost, they must be replaced. Equipment loan hosts should communicate with the Coordinator whenever supplies are in need of replacement. The Coordinator should also proactively check in (we recommend twice a year) and send replacements as needed.

## **EVALUATION**

It is important to gather statistics about how often the equipment at different loan stations is being utilized. This information can be used to quantify the impact of your loan program. It can also be useful in evaluating the number of loan stations and their locations within your region.

For example, if the equipment at one location is constantly being checked out, perhaps you need a second kit at that location. If, on the other hand, equipment at a particular station is not often utilized, you may decide to move that kit to a different location.

# THE EQUIPMENT

See below for the supplies that may be included in an equipment loan kit.

We have provided examples of where to source each piece of equipment, but they may be sourced elsewhere. Costs are approximate in some cases and are subject to change over time.

Biological Equipment	Source	Cost
Student Kick Net	<a href="#"><u>Forestry Suppliers</u></a>	\$51.25
Poles for Kick Net (2 per kit)	<a href="#"><u>Hardware Store</u></a>	\$14.00
D-Frame Net (head & retractable pole)	<a href="#"><u>Forestry Suppliers</u></a>	\$112.75
Dish Tub	<a href="#"><u>Walmart</u></a>	\$4.86
Hand Lenses (4 per kit)	<a href="#"><u>Amazon</u></a>	\$2.00
Petri Dishes (2 per kit)	<a href="#"><u>Amazon</u></a>	\$2.00
Plastic Tweezers (4 per kit)	<a href="#"><u>Amazon</u></a>	\$3.25
Plastic Pipettes (5 per kit)	<a href="#"><u>Amazon</u></a>	\$1.00
Plastic Spoons (5 per kit)	<a href="#"><u>Amazon</u></a>	\$0.50
Ice Cube Trays (2 per kit)	<a href="#"><u>Walmart</u></a>	\$2.43
White Plastic Table Cloth	<a href="#"><u>Walmart</u></a>	\$1.00
Spray Bottle	<a href="#"><u>Walmart</u></a>	\$1.00
		<b>\$196.04</b>

Optional Biological Equipment	Source	Cost
Sieve Bucket	<a href="#"><u>Forestry Suppliers</u></a>	\$110.95
Macro Lens	<a href="#"><u>Forestry Suppliers</u></a>	\$21.50
Magiscope (field microscope)	<a href="#"><u>Brock Optical</u></a>	\$250.00
Folding table	<a href="#"><u>Amazon</u></a>	\$69.99
Field guide (Reese Voshell)	<a href="#"><u>Amazon</u></a>	\$60.94
		<b>\$513.38</b>

# THE EQUIPMENT

*continued*

Chemical Equipment	Source	Cost
Dissolved Oxygen Kit	<u>Chemetrics</u>	\$69.69
Phosphate Kit	<u>Chemetrics</u>	\$81.73
pH Test Strips	<u>Hach</u>	\$19.45
Nitrate / Nitrite Test Strips	<u>Hach</u>	\$34.45
Chloride Low-Range Test Strips	<u>Hach</u>	\$80.45
Transparency Tube	<u>Forestry Suppliers</u>	\$40.75
Plastic Armor Case Thermometer	<u>Forestry Suppliers</u>	\$15.50
		<b>\$324.02</b>

Kit Organization & Cleaning Supplies	Source	Cost
Storage tub	<u>Walmart</u>	\$12.00
Pencil case	<u>Amazon</u>	\$3.33
Biodegradable Soap	<u>Amazon</u>	\$12.99
Scrub brush	<u>Amazon</u>	\$7.85
		<b>\$36.17</b>

## KIT TOTALS

Biological kit (no optional extras)	<b>\$196.04</b>
Chemical kit	<b>\$324.02</b>
Biological + Chemical kit	<b>\$520.06</b>
Biological + Chemical kit with organization supplies	<b>\$556.23</b>
Biological (with extras) + Chemical kit with organization supplies	<b>\$1069.61</b>

# THE EQUIPMENT

*continued*

## THE COST OF MAINTENANCE

Chemical testing supplies (test kits, test strips) have an expiration date. This expiration date is often about 2-years from the date of purchase.

Using this assumption, it is safe to assume that chemical testing supplies must be replaced every 2 years. The cost of the consumable chemical testing supplies is roughly \$285.77.

Below, we have mapped out the cumulative cost of maintaining a chemical equipment loan kit over the course of 5 years.

	Year 1	Year 2	Year 3	Year 4	Year 5	Cumulative Total
Chemical kit	<b>\$324.02</b>	\$0.00	<b>\$285.77</b>	\$0.00	<b>\$285.77</b>	<b>\$895.56</b>

Please note that ***this is a conservative cost estimate***. It does not take into consideration that chemical supplies may need to be replaced more often if they are used up, and chemical & biological supplies may need to be replaced if they are lost or damaged.



# QUESTIONS?

Visit our website, [www.iwla.org/sos](http://www.iwla.org/sos)

Shoot us an email at [sos@iwla.org](mailto:sos@iwla.org)



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