<u>WQDas</u>

Water Quality Data Acquisition Solution

User Manual

Draft

Created By TechZone MD LLC <u>www.techzonemd.com</u> <u>www.wqdas.com</u>



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Introduction

The Water Quality Data Acquisition Solution (WQDas) is an all-encompassing platform tailored for water quality monitoring initiatives. It streamlines the management of diverse elements, including water chemistry, physical attributes, chemical properties, habitat evaluations, biological assessments, and fish tissue studies, among others. As a centralized hub, WQDas empowers organizations to oversee their projects from start to finish within a single, integrated platform.

Key Features of WQDas:

WQDas boasts an array of essential features, such as project tracking, activities tracking, land owner's permission to enter the location tracking, staff training management, and equipment monitoring for each project. Its dashboard aggregates organizational data into a secure repository, ensuring easy access and data integrity. With data visualization tools like charts and graphs, the dashboard delivers a comprehensive overview of project performance.

By presenting all project information on a single screen accessible to team members, WQDas enhances transparency and collaboration throughout the project lifecycle. It effectively monitors activities to ensure smooth operations from inception to completion.

Centralizing data improves accessibility, accuracy, and reliability by creating a single source of truth. This approach supports data portability and standardizes storage and formatting practices across the organization, reducing redundancy and minimizing errors. Real-time access to a unified dataset guarantees that all stakeholders work with consistent information and adhere to standardized protocols.

Moreover, WQDas streamlines the management and design of reporting and analysis protocols, promoting consistency in naming conventions and methodologies across all projects. This adherence to standardized practices aligns with organizational preferences and boosts efficiency in data management and analysis.

Login to WQDas

Please log in to the WQDas platform at www.wqdas.com using the credentials provided by your organization's admin. If you experience any issues, reach out to your admin or email Admin@techzonemd.com. First-time users should use the reset option to obtain a new password after confirming their account creation with the project manager for their organization.

Water Quality Data Ac	Diff 5 quisition Solution	
Sign in to start ye Email	our session	
Password Reset Password	Sign In	

Figure 1 Login screen

Project Catalog view

Click on the "Projects" tab in the main menu to access a centralized list of all projects conducted by your organization. This overview helps keep track of important details, including QAPP status, project manager, project duration, funding sources and the grants associated with each project. Users can quickly review metadata such as the availability of SOPs for team members, ensuring everyone has access to necessary documentation.

\rightarrow (3 🕞 wqdas.con	n/Project/Ir	ndex									☆	5
ty Data Ac	Dass guisition Solution	Graph	Maps and Cale	nder Report	Quality As	isurance Data En Threshold	ttry Manage Inver Permit Project	ntory Manage	Instrument	MetaData	Administrat	ion Ind	ex Calcula
e Pro	oject Catal	log an	nd Setup	for a Ne	w Proje	ct							
Org	anization		Project	Namo	From Dat	ie	To Date	n	Years		Am	sly Filter	Clear
Sele	et Organization	~	Select Project	Name 🗸	10/03/2023		10/03/2024				Apj Apj	oly Filter	Clear
Sele	ct All Deselect all	REACT									Search:		
Sele Show	ect All Deselect all	E Excel	Fnd	Grant				APP Approvi	94	Private	Search:		
Seld	ect All Deselect all entries	Excel Start Date	End Date	Grant Name	Manager	Organization	Administration	QAPP Approvi Organization	ng ∳	Private project	Search:	Active	Action
Sele Show	ect All Deselect all entries Name BI-BI Score Project	Excel	End Date 12-14- 2030	Grant Name 319 grant	Manager Gluth, Edwin	Organization River Keepers	Administration Local RiverKeeper	QAPP Approvi Organization EPA (Approved)	rg	Private project	Search:	Active Yes	Action

Figure 2 Project Catalog

To view project details, click the green "+" sign at the beginning of each row in the Projects Catalog.

Select Organization v Select Project Name v 10/03/2023 10/03/2024 10/0	Hect Organization Select Project Name In 003/2023 Habitat 09-17- 2024 2030 Gluth, Edwin River Keepers Local RiverKeeper EPA (Net Approved Yet) Non Tidal 2013 01-01- 2023 2013 12-31- 2024 2030 Select Project Section Project Location Project Location Non Tidal 2013 2013 2013 2013 Project Location Project Section Project Location Project Characteristic Project Sample Study Project Location Study Schedule Project Units	Jrga	nization	Р	roject		From Dat	e	To Date		Years			
Habitat 09-17- 12-31- 319 grant Gluth, River Keepers Local RiverKeeper EPA (Net Approved Ye) So Image: Constraint of the second se	Habitat 09-17- 12-31- 319 grant Gluth, River Keepers Local RiverKeeper EPA Kat Approved Yet No Image: Constraint of the second s	Selec	t Organization	× .	Select Project 1	Name 🗸	10/03/2023	ť	10/03/2024			#	Apply Filter	Clear
Non Tidal 2013 01-01- 2013 12-31- 2023 General Funds Andy, Nathan River Keepers Local RiverKeeper Chesapeake Bay Not Approved Yet No 0 Yes 0 Project Section Project Location Project Characteristic Project Sample Study Project Location Study Schedule Project Units Project Units	Non Tidal 2013 01-01- 2013 12-31- 2023 General Funds Andy, Nathan River Keepers Local RiverKeeper Chesapeake Bay Net Approved Yet No ● Yes > Yes ● Y	0	Habitat Assessment Project	09-17- 2024	12-31- 2030	319 grant	Gluth, Edwin	River Keepers	Local RiverKeeper	EPA Not Approved	Yet No	•	Yes	
Project Section Project Location Project Characteristic Project Sample Study Project Location Study Schedule Project Units	Project Location Project Characteristic Project Sample Study Project Location Study Schedule Project Units Name Description Team Active	Ð	Non Tidal 2013 -2023	01-01- 2013	12-31- 2023	General Funds	Andy, Nathan	River Keepers	Local RiverKeeper	Chesapeake Bay	No	0	Yes	
None Description Turn Autom	vane Description Iean Active	Pr	oject Section	2013 'roject Locat	tion Proje	ectCharacterist	ic Project s	Sample Study	Project Location Stud	y Schedule Pr	oject Units		Antin	
Gwynns Falls Section All non Tidal areas in Gwynns Falls Team A Yes														

Figure 3 Project Details

Users can view all details about the project, including sections, sampling locations, sampling plans, monitoring characteristics, and the schedule in one centralized solution.



Figure 4 Project Location

Orga	anization		Project		From	Date		To Date		Years	5			
Sele	et Organization	~	Select Project 1	Vame	1 0/03	2023		10/03/2024	C)		Ap Ap	ply Filter	Clear
•	Habitat Assessment Project	09-17- 2024	12-31- 2030	319 grant	Gluth, Edwin	River K	eepers L	ocal RiverKeeper	EPA Not Ap	proved Yet	No	•	Yes	2
0	Non Tidal 20 -2023	13 01-01- 2013	12-31- 2023	General Funds	Andy, Nathan	River K	eepers L	ocal RiverKeeper	Chesapeake Not Approved	Bay Yet	No	0	Yes	
P	roject Section	Project Lo	cation Proje	ctCharacteri	stic Pro	ject Sample Sti	ıdy Proj	ect Location Study S	Schedule	Project U	nits			
												G		
Pr	oject	Characterist	cs	Min Value	Max Value	Unit	Common Name	Chr Monitor Type	Media	Sub Media	Sample Faraction	Name	ıy Mi Sp	ethod eciation
Pr No -20	oject on Tidal 2013 023	Characterist pH	cs	Min Value	Max Value 9	Unit None	Common Name pH	Chr Monitor Type Field	Media Water	Sub Media Water	Sample Faraction	Name Field Measuremen	ty M Sp	ethod eciation
Pr No -20 No -20	oject on Tidal 2013 023 on Tidal 2013 023	Characterist pH Nitrate + Nitr	cs Te	Min Value 6 0.001	Max Value 9 2	Unit None mg/l	Common Name pH	Chr Monitor Type Field Laboratory	Media Water Water	Sub Media Water Water	Sample Faraction Dissolved	Name Field Measuremen Water Chemi	t istry As	eciation

Figure 5 Project Characteristic

Users can view the "Sample Study" details on this tab, including the type of sampling method and the containers that will be used for the project.

	Monitoring	g Project Gr	ph Maps and C	alender Report	Quality Assurance	Data Entry	Manage Inventory	Manage Instrument	MetaData	Administration	Index Calculation	Threshold	Permit Projec	
Proj	ect Catalog and	Setup fo	r a New Pr	oject										
Organ Select	ization Organization	Proje	t Project Name	~	From Date		To Dat	24		Years		Apply Fi	lier Clear	
Select Show	All Deselect all Deselect all											Sea	irch:	
	Name 🗍	Start Date	🕴 End Date 🕴	Grant Name	Manager 🕴	Organization) Administrati	on 🕴 QAPP Appro	wing Organiza	tion	Private project	sop	• Active	Action
0	BI-BI Score Project	09-02-2024	12-14-2030	319 grant	Gluth, Edwin	River Keepers	Local RiverK	eeper EPA Approved			•	•	•••	
0	Continuous Logger Project	01-01-2022	12-31-2025	319 grant	Gluth, Edwin	River Keepers	Local RiverK	eper EPA Not Appr	oved Yet		8	View	•	
0	FIBI Score project	01-02-2023	12-14-2030	General Funds	Gluth, Edwin	River Keepers	Local RiverK	eper EPA Approved)		•	View	•	
0	Fish Tissue Project	05-01-2024	12-31-2026	General Funds	Gluth, Edwin	River Keepers	Local RiverK	eper EPA Not Appr	aved Yet		60	View	Yes	0 / 0
Pro	ject Section Project Locati	on ProjectC	haracteristic P	roject Sample Study	Project Locatio	n Study Schedul	Project Units							
Sam	ple Study		Sample Holdi	ing Period			Sample Hold P r U	it Name			Collection Cont	ainer		
Fish	Tissue		365				days							
Wate	r Chemistry		28				days							
Obse	rvations													
Field	Measurement													

Figure 6 Project Sample Study

Users can view the sampling frequency for each site within the sample study, along with the equipment used at each location during the sampling process for the project.

gar	ization	Pro	ject			From Date			To Date			Years		_	_		
lec	Organization	∽ Sel	lect Pro	ject Name	~	10/08/2023		(10/08/2024				Ē	Apply Filter	Clear		
)	BI-BI Score Project	09-02-2024	4	12-14-2030	319 grant	Gluth, Edwin	River Keepers	;	Local RiverKeeper	EPA Approve	C		No	0	No		
	Continuous Logger Project	01-01-2022	2	12-31-2025	319 grant	Gluth, Edwin	River Keepers		Local RiverKeeper	EPA Not Appr	reved Yet		80	View	•••	0	
	FIBI Score project	01-02-2023	3	12-14-2030	General Funds	Gluth, Edwin	River Keepers		Local RiverKeeper	EPA Approve	0		80	View	-		
5	Fish Tissue Project	05-01-2024	•	12-31-2026	General Funds	Gluth, Edwin	River Keepers		Local RiverKeeper	EPA Not Appe	oved Yet		80	View	Yes	0 / 0	
Pr	vject Section Project Location ProjectCharacteristic Project Sample Str		oject Sample Study	Project Locatio	on Study Schedu	de F	roject Units										
?ro	ect Location	Sample	Study		Collection C	Container	Collecti		Equipment	1	Profile	Number Of Sample		Collection Free	luency		
VW	W-PATMH-22	Fish Tiss	ue		Plastic Buck	et	Fi	sh Shocl	er	2	No	5		Once, Seasonal	Only		
vw	W-PATMH-22	Water Ch	nemistry	7	Glass Vail		G	rab Samj	de	2	No	1		Once, Seasonal	Only		
νw	W-PATMH-22	Field Me	asurem	ent	Glass Vail		G	Grab Sample		No 1		Once, Sea		easonal Only			
DR	AGON WOATS	Fish Tiss	ue		Plastic Buck	et	Fi	Fish Shocker		No 5		5	5 On		nce, Seasonal Only		
	AGON WOATS	Water Ch	nemistry	7	Glass Vail		G	rab Samj	le	2	No	1		Once, Seasonal	Only		
DR																	

Figure 7 Project Sampling Schedule

Users can view the measuring units associated with each sample study for a project.

ro	ject Catalog and	Setup fo	r a New Pr	roject									
rgai	nization	Proje	ct		From Date		To Date		Years				
elec	t Organization	~ Selec	t Project Name	~	10/08/2023		10/08/2024				Apply Filte	Clear	
0	BI-BI Score Project	09-02-2024	12-14-2030	319 grant	Gluth, Edwin	River Keepers	Local RiverKeeper	EPA Approved		No	0	80	
0	Continuous Logger Project	01-01-2022	12-31-2025	319 grant	Gluth, Edwin	River Keepers	Local RiverKeeper	EPA Not Approved Yet		10	View	80	
0	FIBI Score project	01-02-2023	12-14-2030	General Funds	Gluth, Edwin	River Keepers	Local RiverKeeper	EPA Approved		•	View	80	
0	Fish Tissue Project	05-01-2024	12-31-2026	General Funds	Gluth, Edwin	River Keepers	Local RiverKeeper	EPA Not Approved Yet		80	View	Yes	
Pr	oject Section Project Locat	ion Project(haracteristic P	Project Sample Study	Project Locati	on Study Schedule	Project Units						
Pro	aject Name	Pro	ect SampleStudy		Unit Typ	•	Unit Name	Unit StartDate		Unit EndDate		Comment	
Fisi	h Tissue Project	Wat	er Chemistry		Sample D	epth	ft	2024-09-01					
Fisl	h Tissue Project	Fiel	d Measurement		Sample D	epth	ft	2024-09-01					
Fisi	h Tissue Project	Obs	ervations		Percentag	e	%	2024-09-17					
Fisi	h Tissue Project	Fiel	d Measurement		Stream W	idth	ft	2024-09-17					
Fisl	h Tissue Project	Fiel	d Measurement		Stream Lo	ength	ft	2024-09-17					
Fisl	h Tissue Project	Fiel	d Measurement		Water Vel	ocity	cm/sec	2024-09-17					

Figure 8 Project Units

The WQDas will generate a Quality Assurance Project Plan (QAPP) for each individual project during the "Project" setup process. For each individual project there is an option to upload Standard Operating Procedures (SOP) as documents, which can be included in the QAPP. To generate the OAPP click the "PDF" action button, which allows you to save the document

To generate the QAPP, click the "PDF" action button, which allows you to save the document. This will open in a new window for your convenience.

oject catalog and	I Setup for	r a New Pr	oject									
ganization	Projec	t		From Date		To Date		Years				
ect Organization	~ Select	Project Name	~	10/08/2023		10/08/2024				Apply Filter	Clear	
ect All Deselect all PExcel										Searcl	h:	
Name	🕴 Start Date	0 End Date 0	Grant Name	Manager	Organization	Administration	QAPP Approving Organizati	on	Private project	♦ SOP ♦	Active	Action
BI-BI Score Project	09-02-2024	12-14-2030	319 grant	Gluth, Edwin	River Keepers	Local RiverKeeper	EPA Approved		60	•	•	- 2
Continuous Logger Project	01-01-2022	12-31-2025	319 grant	Gluth, Edwin	River Keepers	Local RiverKeeper	EPA Not Approved Yet		60	View	•••	0 🗸
FIBI Score project	01-02-2023	12-14-2030	General Funds	Gluth, Edwin	River Keepers	Local RiverKeeper	EPA Approved		80	View	•••	0 🗸
Fish Tissue Project	05-01-2024	12-31-2026	General Funds	Gluth, Edwin	River Keepers	Local RiverKeeper	EPA Not Approved Yet		60	View	•••	0 🗸
Habitat Assessment Project	09-17-2024	12-31-2030	319 grant	Gluth, Edwin	River Keepers	Local RiverKeeper	EPA Not Approved Yet		60	•	30	0 <
Non Tidal 2013 -2023	01-01-2013	12-31-2023	General Funds	Andy, Nathan	River Keepers	Local RiverKeeper	Chesapeake Bay Not Approved Y	0	60	•	-	0 🗸
Testing Project	09-25-2024	12-31-2026	General Funds	Gluth, Edwin	River Keepers	Local RiverKeeper	EPA Not Approved Yet		80	View	•••	0 🗸
Tidal Data 2009-2023	01-01-2009	12-31-2023	319 grant	Andy, Nathan	River Keepers	Local RiverKeeper	Chesapeake Monitoring Coope	rative Approved	60	View		0



Starting a New Project:

For any projects, all Create, Update, and Delete (CUD) options are restricted to the Organization Admin and Administration Lead, while all other roles have Read-Only access.

Requirements Before Starting a New Project:

Add Location Information: Ensure all location details are entered into the "Master Location" table under the "Metadata" menu.

Assign Inventories: Make sure that all necessary equipment and inventories are assigned to field staff.

Prepare Parameters/Characteristics List: Have a ready list of parameters and characteristics, including Units, Minimum and maximum acceptable values, Indication of whether values are collected in the field or received from lab analyses.

Before creating a new project, it is essential to populate the "Location Master" tab with all relevant location information to assign these locations to the project. This allows for reusing locations across multiple projects, as the same location can be assigned to many projects. Users can add new data by clicking the "+" sign in the upper right corner.

Create a Location in Location Master table

Ensure that all details for each location are included in the master table. Key information should encompass: Location Type, watershed, Latitude, Longitude, state etc. Additional relevant attributes such as land use, access points, and any specific notes regarding environmental conditions or restrictions.

This comprehensive data will facilitate effective project planning and management.

← → C (25) wqdas.com/Project/Index				ର୍	. 🛧 🖸 🗶 🛛
WORDAS Monitoring Project Graph	Maps and Calender Report Quality Assurance	e Data Entry Manage Inventory Manage Instru	ment MetaData Administration Index Calculati	ion Threshold Permit Project	•
Project Project Catalog and Set Project Location Project Location	ect				
Project Name * Project Sample Study Test Test Project Coarise Schedule Project Characteristic	Project StartDate * 01.01/2023	Project EndDate * 12/31/2028	Gra 31	nt Name * 9 grant	~
Description Project Logge Deploy Study for water Chemistry Project Unit		Observation & Key Points Key points to run this project			
Urganization *	Administration *	Manager *	Sub (10)	omit Date * 12/2024	~
Qapp Approving Organization * Local Government	Qapp Approved *	Beach V No	Pri V	vate	~
Active * Yes ~					
Upload SOP					
Ø					
Choose File WQDAS (8) pdf					Sare Clear

Figure 10 Add a new Location into Location Master table.

Users can view a comprehensive list of all locations utilized across various projects. This serves as the master list of all sampling locations used by the organization at any given time.

	Monitoring Project Gra	ph Maps and (Calender Report	Quality Assurance	Data Entry Man	age Inventory	Manage Instrument	MetaData	Administration	Index Calculation	Threshold	Permit Project	(
								Instruments	Manufacturers				
All Locations								Instrument N	fodel				
								Watershed Master Loca	tion				
Location Type			WaterShed			Datum		Training					
Select LocationType		~	Select Watershed		~	Select Da	tum	TrainingCate	gory	Apply Filter Cl	sar		
ihow 10 🖌 entries								Team Team Memb	M			Search:	
Name	A Location Type	WaterShee	i 🔶 Datum	Country	¢	State	🗧 Latitude 🔶	Taxon Bug	te	a IsPermissi	on 🔶	IsActive	Action
DRAGON WOATS	Tidal	Gwynns Fa	ils NAD27	United States	of America	Maryland	39.28499	Delivery		10		10	
SCIENCE CENTER	Tidal	Gwynns Fa	ils NAD27	United States	of America	Maryland	39.28242	Characteristi	c Sync	60			
WWW-GWN-46	Tidal	Gwynns Fa	lls NAD27	United States	of America	Maryland	39.431953	LookUp WaterShed	fitigation	800			
WWW-GWN-48	Tidal	Gwynns Fa	ils NAD27	United States	of America	Maryland	39.404778	WaterShed S	ubDivided	50		•	
WWW-GWN-49	Tidal	Gwynns Fa	ils NAD27	United States	of America	Maryland	39.388218	-76.78652	80	800		Sin	
WWW-GWN-50	Tidal	Gwynns Fa	lls NAD27	United States	of America	Maryland	39.360516	-76.74716	80	80			
WWW-GWN-51	Tidal	Gwynns Fa	lls NAD27	United States	of America	Maryland	39.38285	-76.758	80				20
WWW-GWN-52	Tidal	Gwynns Fa	ils NAD27	United States	of America	Maryland	39.36168	-76.74414	80	80		S	20
WWW-GWN-53	Tidal	Gwynns Fa	lls NAD27	United States	of America	Maryland	39.32772	-76.715775	80	<u>80</u>		No	20
WWW-GWN-54	Tidal	Gwynns Fa	dls NAD27	United States	of America	Maryland	39.32674	-76.713844	80	80		S	

Figure 11 List of al the locations in "Master Location"

Landowner's Permission Tracking

Coming soon:

Project managers can monitor the landowner's permission status for each location by clicking on the "Permission" tab in the Location table. If a location is on private land requiring permission, users can check whether the landowner has granted access to the team.

- > C 🖘 wqo	das.com/LocationMaster/I	index										Q ☆	Ð	N
WCDAS r Quelley Data Angulation Solution	Monitoring Project Graph	Maps and Cale	nder Report	Quality Assurance	Data Entry Manage	e Inventory	Manage Instrument	MetaData A	dministration	Index Calculation	Threshold	Permit Project		
All Locations														+
Location Type		Wa	terShed			Datum					_		-	
Select LocationType		∽ Sel	lect Watershed		~	Select Data	m		~	Apply Filter Ch	ar			
Show 10 🗸 entries												Search:		
Name	A Location Type	WaterShed	† Datum	† Country	₹	State 🗍	Latitude 🕴	Longitude	+ IsPrivate	4 IsPermissi	on 🔶	IsActive 🕴	Action	\$
DRAGON WOATS	Tidal	Gwynns Falls	NAD27	United States of	f America	Maryland	39.28499	-76.60981	80	<u>Sa</u>		Yes		
SCIENCE CENTER	Tidal	Gwynns Falls	NAD27	United States of	f America	Maryland	39.28242	-76.61105	80	•••		Veo		
WWW-GWN-46	Tidal	Gwynns Falls	NAD27	United States of	f America	Maryland	39.431953	-76.78062	80	<u>.</u>		Yes		
WWW-GWN-48	Tidal	Gwynns Falls	NAD27	United States of	f America	Maryland	39.404778	-76.77911	80	•••		Ve		
WWW-GWN-49	Tidal	Gwynns Falls	NAD27	United States of	f America	Maryland	39.388218	-76.78652	8	10		Tes		
WWW-GWN-50	Tidal	Gwynns Falls	NAD27	United States of	f America	Maryland	39.360516	-76.74716	8	60		Te		
WWW-GWN-51	Tidal	Gwynns Falls	NAD27	United States of	f America	Maryland	39.38285	-76.758	80			<u>Vii</u>		
WWW-GWN-52	Tidal	Gwynns Falls	NAD27	United States of	f America	Maryland	39.36168	-76.74414	80	60		<u>Ve</u>		
WWW-GWN-53	Tidal	Gwynns Falls	NAD27	United States of	f America	Maryland	39.32772	-76.715775	8	-		Yes		
WWW-GWN-54	Tidal	Gwynns Falls	NAD27	United States of	f America	Maryland	39.32674	-76.713844	80	•••		Yes		

Figure 12 Checking to see if you have permission to access this location.

All Locations on the Map

Users can view all locations on the map, presented as clusters for easier navigation and analysis.



Figure 13 Map with All the locations

Creating a New Project

Before initiating a new project, the Project Manager must verify that all locations are included in the "Location Master" table. Additionally, field staff or those responsible for data collection should have the necessary equipment assigned for the process. Each team member must also be assigned an appropriate role to ensure the project's organizational structure is maintained. After that the project manager can start filling all the fields in this screen.

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	DA	5			Monitoring Proje	ct Graph	Maps and Calender	Report	Quality Assurance	Data Entry	Manage	Inventory	Manage Instrume	nt MetaDat	ta Administration	Index (alculation	Threshold	Permit Project			(0
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Str	s cripti e ady for w	on ater Chemistry	,		Project Logger 1 Project Unit	Deploy		_				Observatio	n & Key Points										
Or R	ganiza iver Ke	tion * epers					Administration *	r				Manager * Andy, Nati	han			~	Submit I 10/12/202	Date *					
Q: Lo	app App cal Gove	proving Org	anization *				Qapp Approved • Yes				v	Beach No				~	Private No						~
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Figure 14 Create a new project

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TechZone MD LLC

Create Project Sections

For each project, the Project Manager will outline all sections corresponding to various monitoring locations. This structure enables project managers to assign each section to a specific team. Sections consist of a group of locations within a designated area. These sections can help to run a few reports and see trends in a specific section. To add new entries, use the "+" sign in the top right corner.

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Contraction Section Monitoring Project Graph	Maps and Calender Report Quality	Assurance Data Entry Manage Inventory M	Manage Instrument MetaData Administrat	ion Index Calculation	Threshold Perm	it Project
Project Project Section Project Location						
Name * Project Sample Study	Project*	Team*		Active *		
Name Project Location Schedule Project Characteristic	Select Project	✓ Select Team		✓ Select Active		Ý
Description Project Logger Deploy						
Description Project Unit						
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Project	Team					
Select Project	∽ Select Team	🗸 Apply Filter	Clear			
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show 10 v entries					Searca.	
Project Name	A Section Name	Description	¢	Team 🔶 J	Active ϕ	Action 0
BI-BI Score Project	Piedmont section	Piedmont section		Team A	¥0	
BI-BI Score Project	Costal Section			Team A	Ya	20
BI-BI Score Project	Highland Section			Team A	Ya	20
Continuous Logger Project	East Logger Section			Team A	Ya	20
					_	

Figure 15 Project Section

Create Project Location Group

The project manager will designate sampling locations for each project, utilizing metadata already available in the "Location Master Table," which contains all essential details. In this section, the project manager will outline how team members can access these locations and specify the types of samples to be collected.

Team members can collect either a "Simple" sample, taken from a specific location, or a "Composite" sample, which combines samples gathered from multiple locations. For more information on additional locations for composite samples, click the "i" in the Detail column. To add new entries, use the "+" sign in the top right corner.

C S wqdas.com/	/ProjectLocation/Ind	dex										० 🕁) Þ
Acquisition Solution	g Project Graph	Maps and Cale	nder Report	Quality Assurance	Data Entry	Manage I	nventory Manage Instrument	MetaData	Administration	Index Calculation	Threshold	Permit Project	C
roject Location G	TOUR												
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oject Name	Primary Location	n (Project Section ?	íame 🔶	Location Type		Location Selection	Location R	gion	Location Accessed	Ву	• Details	Actions
al Profiles 2013-2023	WWW-PATMH-S	iC .	Tidal with Profile		Composite		Targeted			Small Boat			
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al Profiles 2013-2023 al Profiles 2013-2023 al Profiles 2013-2023	WWW-PATMH-S WWW-PATMH-D SCIENCE CENTH	SC DW ER	Tidal with Profile Tidal with Profile Tidal with Profile		Composite Simple Simple		Targeted Targeted Targeted	Piedmont		Small Boat Small Boat Small Boat		8	
lal Profiles 2013-2023 lal Profiles 2013-2023 lal Profiles 2013-2023 lal Profiles 2013-2023	WWW-PATMH-S WWW-PATMH-D SCIENCE CENTH DRAGON WOAT	SC DW ER ES	Tidal with Profile Tidal with Profile Tidal with Profile Tidal with Profile		Composite Simple Simple Simple		Targeted Targeted Targeted Targeted	Piedmont		Small Boat Small Boat Small Boat Small Boat			
Ial Profiles 2013-2023 Ial Profiles 2013-2023 Ial Profiles 2013-2023 Ial Profiles 2013-2023 Ial Profiles 2013-2023	WWW-PATMH-S WWW-PATMH-D SCIENCE CENTH DRAGON WOAT	ER 12	Tidal with Profile Tidal with Profile Tidal with Profile Tidal with Profile Tidal with Profile		Composite Simple Simple Simple Simple		Targeted Targeted Targeted Targeted Targeted	Piedmont Piedmont Piedmont		Small Boat Small Boat Small Boat Small Boat Small Boat		8	20 20 20 20 20

Figure 16 Project Location setup

Designing a Sample Study Plan

The project manager will define the sample study design by selecting options from a dropdown list for samples collected during fieldwork or various project activities. This section will outline all sampling plans necessary for populating the relevant field sheets. Examples of these plans include Observations, Field Measurements, Water Chemistry, Chlorophyll, Bacteria, Sediment, Fish Tissue, Metals, Ion Matrix, Nutrients, BIBI Scores, FIBI Scores, Continuous Logger, Stream Flow, Habitat Assessment, Spring Index Period, Faunal Data, Vernal Pool, and Salamander Data.

For any plan involving field staff collecting samples for lab analysis, it's essential to add holding times to track each sample. Specifically, for Water Chemistry, Chlorophyll, Bacteria, Sediment, Fish Tissue, Metals, Ion Matrix, and Nutrients sampling, establishing a holding time allows the project manager to generate reports assessing whether all data was analyzed within the required timeframe.

*This section must be completed before adding "Project Characteristics" to any project.

Nonitoring Project Graph	Maps and Calender Report Quality A	ssurance Data Entry Manage Inv	entory Manage Instrument MetaData	Administration Index Calculation	Threshold Permit Project
Project					
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oject Project Location Schedule	Sample Study	τ	nit		
elect Project Characteristic	✓ Select Sample Study	× !	elect Unit 🗸 🔥	oply Filter Clear	
Project Logger Deploy					
elect all Deselect all Project Unit					Search:
w 10 v entries					
oject	Sample Study	A Sample Holding Period	() Sample	Holder per Unit	Action
dal Data 2009-2023	Bacteria	7	hours		
sting Project	Bacteria	7	hours	_	20
m Tidal 2013 -2023	Bacteria	7	hours		20
m Tsdal 2013 -2023 -BI Score Project	Bacteria BIBI Scores	7	hours		
n Tidal 2013 -2023 -BI Score Project fal Data 2009-2023	Bacteria BIBI Scores Chlorophyll	7 30	hours days		20
n Tidal 2013 - 2023 -BI Score Project dal Dara 2009-2023 ntimuous Logger Project	Bacteria BIBI Scores Chlorophyll Continous Logger	7	hours days		20 20 20
n Tidal 2013 - 2023 -BI Score Project dal Data 2009-2023 etimuous Logger Project BI Score project	Batteria BIBI Scores Chlorophyll Continous Logger FIBI Scores	7	hours days		20 20 20 20 20
n Tafal 2013 - 2023 BI Score Project Ial Data 2009-2023 attimuous Logger Project 31 Score project Ial Profiles 2013-2023	Bacteria BIBI Scores Chlorophyll Cottinous Logger FIBI Scores Field Measurement	7 30	hours days		20 20 20 20 20 20 20
n Tidal 2013 - 2023 -BI Score Project dal Data 2009-2023 ntimuous Logger Project BI Score project dal Profiles 2013-2023 dal Data 2009-2023	Bacteria BIBI Scores Chlorophyll Continous Logger FIBI Scores Field Measurement Field Measurement	7 30	hours days		

Figure 17 Define Sample study design

Create Location Schedule for Monitoring

The project manager will create a sampling schedule for each location within the project by selecting specific locations and their corresponding sample study design options. This schedule will outline how many samples will be collected at each location, with or without a profile.

To add new entries, users can click the "+" sign in the top right corner.

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Water Quali	/ 💭														
	М	Ionitoring Project	Graph	Maps and Calend	r Report	Quality Assurance	e Data Entry	Manage Inventory	Manage Instrument	MetaData	Administration	Index	Calculat	ion	
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		Project Location Scr	c		-										1
		Project Logger Depl	oy		Project Locat	ion*		Project Sample Study	•	Profile	*				
	1	Project Unit		~	WWW-PATM	H-13	~	Water Chemistry		✓ Yes				~	
	Nu	mber Of Smaple [*]			Collection Fre	equency*		Collection Container		Collec	tion Equipment *				
	2				Monthly, Seas	onal Only	~	Glass Vail		✓ Grab S	Sample			~	
												Г	Save	Clear	Π
														_	-

Figure 18 Define all the schedules for each individual location

Add Monitoring Parameters to the Project

The project manager will outline all relevant parameters, specifying each with reporting units, methods, sample fractions, and acceptable ranges for basic validation. The characteristic monitoring type will help team members manage data from various sources, including Field, Laboratory, and Continuous Logger. The Sample Study design will facilitate the assignment of parameters to specific categories such as Field Measurement, Water Chemistry, Chlorophyll, Bacteria, Sediment, Fish Tissue, Metals, Ion Matrix, Nutrients, BIBI Scores, Continuous Logger, Stream Flow, FIBI Scores, Habitat Assessment, Spring Index Period, Faunal Data, Vernal Pool, and Salamander Data.

Parameters collected in the field will be classified as "Field" under the "Characteristic Monitoring Type" and labeled as "Field Measurement" in the Sample Study. In contrast, parameters where field staff collect water samples for laboratory analysis will be identified as "Laboratory" and categorized as "Water Chemistry." This classification also applies to "Bacteria" samples, which will be labeled as "Laboratory" and "Bacteria." Continuous monitoring parameters from loggers will be classified as "Logger" under "Characteristic Monitoring Type" and labeled as "Continuous Logger."

The project manager can assign a "Common Name" to any parameter, while the "Characteristic" name will adhere to the EPA's WQX schema, ensuring compatibility solely with WQX. For continuous monitoring loggers, the common name may reflect what is in the export file from the instrument.

These classifications will aid in generating field sheets for staff. Additionally, defined maximum and minimum values will support the QA/QC process by indicating whether values fall within acceptable ranges, with any out-of-range values highlighted in red. Users can use the "+" sign in the top right corner to add new entries.

· → C • wqdas.com/Characte	eristic/Index			☆ 12 0
er Quality Data Acquisition Solution				
Monitoring Project Graph	Maps and Calender Report Quality Assurance	e Data Entry Manage Inventory Threshold Permit Project	Manage Instrument MetaData	Administration Index Calculation
Project				
Project Location				
Project Sample Study	ristic Setun			
Project Location Schedule	istic Setup			
Project Characteristic	Characteristics *	Unit *	ChrMon	itorType *
Project Logger Deploy Project Unit	✓ Select Characteristics	∽ Select Unit	✓ Select C	hrMonitorType ~
Media *	Sub Media *	SampleFraction	Sample S	Study
Select Media	~] [✓ Select Sample Fraction	n ×	~]
Method Speciation	Min Value *	Max Value *	Common	1 Name
Select Method Speciation	~			
				Save Clear

Figure 19 Characteristic setup for a project

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	Monitoring Project Graph	Maps and Calen	der Report	Quality Assurance	e Data Entry	Manage	Inventory	Manage Instrumen	nt MetaData	Administration	Index Calculation	Threshold	ermit Project	We
Project Charac	Project Project Section Project Location													
Project	Project Sample Study Project Location Schedule	Char	acteristics				ChrMonitor	Туре						
Tidal Profiles 2013-2023	Project Characteristic Project Logger Deploy	~ Sele	t Characteristics			~	Select ChrM	onitorType		~	Apply Filter	Clear		
Select All Deselect all	Project Unit												Search:	
Show 10 🗸 entries											_			
Project Name	Characteristic 🗍	Min Value 🕴	Max Value 🕴	Unit 🕴	Common Name	Chr 3	Ionitor Type	🕴 Media 🔶	Sub Media 🕴	Sample Fraction	Sample Stud	ly Name	Method Speciation	Action
Tidal Profiles 2013-2023	Depth	0	15	m		Field		Water	Water		Field Measur	ement		
Tidal Profiles 2013-2023	Dissolved oxygen (DO)	0	21	mg/l		Field		Water	Water		Field Measur	ement		
Tidal Profiles 2013-2023	Dissolved oxygen saturation	0	100	%		Field		Water	Water		Field Measur	ement		
Tidal Profiles 2013-2023	pH	6	8.5	None	pH	Field		Water	Water		Field Measur	ement		
Tidal Profiles 2013-2023	Phycoerythrin	1	145000	#/ml		Field		Water	Water		Field Measur	ement		20
Tidal Profiles 2013-2023	Salinity	1	19	ppt		Field		Water	Water		Field Measur	ement		
Tidal Profiles 2013-2023	Specific conductance	5	30000	uS/cm		Field		Water	Water		Field Measur	ement		
Tidal Profiles 2013-2023	Temperature, water	-5	25	deg C		Field		Water	Water		Field Measur	ement		

Figure 20 Assign all characteristics to a project with all metadata

Deploy Continuous Logger

If a project manager needs to deploy a continuous logger for temperature, turbidity, or other parameters, they can set up the logger and monitor all continuous data collected. For new logger deployments, it's crucial that the logger is listed on the inventory table with all necessary information. If the logger is not already in the inventory, it must be added first. The "+" sign in the top right corner is always used for creating new entries.

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Water Quality Data Acquisition Solution								
Monitoring Project G	Graph Maps and Cal	ender Report Qua	lity Assurance Data Er	ntry Manage Inventory	Manage Instrument	MetaDa	ta Administration	Index Calculation
Project			Threshold	Permit Project				
Project Section								
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Project Sample Study	Deploy Set	սթ						
Project Location Schedu	le	-						
Project Characteristic	· · · · · · · · · · · · · · · · · · ·	Project Location*		Inventory(Barcode)	•	Fre	equency*	
Project Logger Deploy Project Unit	~	WWW-PATMH-DW	~	8565465 - Logger		✓ 15	minutes intervel, Conti	nous 🗸
Logger Depth *		Unit*		Deploying Date*		Un	Deploying Date	
2		ft	~	10/08/2024 04:34 PM		—	1/dd/yyyy:	
Comments 1				Comments 2				
Comments				Comments				
				4				4
								Save Clear

Figure 21 Logger deployment for continuous monitoring

Assigning Different Units

The project manager ensures that all required units for various measurements are included. Team members should be well-versed in the measurement units used for each sampling depth, whether in meters, feet, or yards. This applies equally to flow measurements.

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	Monitoring Project Graph	Maps and Calender Re	port Quality Assurance D	ata Entry Manag	Inventory M	Manage Instrument M	etaData Administrat	ion Index Calculation	Threshold	Permit Project	
Project Units	Project Project Section Project Location										
Project*	Project Sample Study	Project Sample	Study*		Unit Type *			Unit*			
Select Project	Project Location Schedule Project Characteristic	~		~	Select Unit T	ype		•			~
Unit StartDate *	Project Logger Deploy	Unit EndDate			Comment						
mm/dd/yyyy	Project Unit	mm/dd/yyyy		ū	Comment						
											li
											Save Clear
Project Name	Project Sa	mpleStudy	Unit Type		Unit StartDat	te	Unit EndDate				
Tidal Data 2009-2023	✓ Select Pro	oject SampleStudy	∽ Select Unit Type	~	mm/dd/yyyy		mm/dd/yyyy		Apply Fil	tter Clear	
Select All Deselect all	Excel								5	Search:	
Project Name	+ Project Samples	Study	Unit Type	† Unit Name	÷	Unit StartDate	🕴 Unit End	Date 🔶	Comment	÷ Actio	
											n ÷
Tidal Data 2009-2023	Water Chemistry		Sample Depth	m		2003-01-01					n (†
Tidal Data 2009-2023 Tidal Data 2009-2023	Water Chemistry Field Measureme	nst	Sample Depth Sample Depth	m m		2003-01-01 2024-01-01					n ¢

Figure 22 Assigning different units

Assigning Instruments to Staff

Project managers need to assign instruments to field staff to enable them to carry out their responsibilities effectively. Before assigning any instrument, it must be included in the inventory table with all relevant metadata. For guidance on how to add an instrument to the table, please see the section on "Instrument Inventory Management."

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								Threshold Pe	Create Inventory					
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_									Assign Inventory to	Members				
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Г	In	ventory	*				User To Assign*				Active *			
	S	elect Inv	rentory			~	Select User			~	Select Activ	re		~
L														Save Clear

Figure 23 Assign instruments to staff

Data Entry:

All field sheets will be populated based on the project's definition, Sample Study design, and the instruments assigned to staff. For instance, if a project includes "Observations," "Water Flow," "Field Measurements," and "Water Chemistry," the field sheets will display only these four sections. Conversely, if a project consists solely of "Field Measurements" and "Water Chemistry," only those two sections will appear. Similarly, if a project includes only BIBI or FIBI Score options, the sheets will populate with just the BIBI and FIBI score sections. This logic applies to all other Sample Study options as well. Please refer to the explanation below for details on each individual sample study option.

Data From the Field

Starting an Activity in the Field

Field staff will initiate an activity by selecting a project name, location, and date using a data entry screen. They can start by clicking the "+" sign in the top corner to expand the screen, while the "-" sign will minimize it.

Once the project name is selected, all related sheets will populate according to the Sample Study Plan for that specific project. The screen will first prompt users to validate which instruments they plan to use during this visit. This list will only display the instruments assigned to the user. If no instruments have been assigned, an error message will indicate that required fields are missing.

wquas.com/DataEntry/	Index				ਕ ਸ਼ ਪ
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		Field Data Entry			
ata Entry Screen Setup	,	Import Lab Result File			
		Activity Fish Tissue Sampling Setup			L
	0	Chain Of Custody		2	
	DATA ENTRY	Activity Logger	FIELD ME	ASUREMENT	
roject*	Project Location*	Import Calibration data from the Logger		Activity StartDateTime*	
idal Profiles 2013-2023	V WWW-PATMH-02	Data Entry for Census	~	10/10/2024 05:37 PM	
uslider Code		Habitat Assessment			
alart Ouslifiar Code	~				
cite quanter cooc	-				
omments					
omments					
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Instruments Verificati	on				
					_
astruments			Today used	Calibration Enable	1
SI, a Xylem brand ,DS5,454545,Sonde					
					NT

Figure 24 Data entry setup Instrument verification

Collecting Observations in the Field

If the project manager includes "Observations" in the Project Sample Study section, the "Observation" section will be available for data entry. This value is recorded as a percentage; for example, if there are 10% clouds today, that will be reflected in the data entry. The same applies to "Tides," which is also recorded as a percentage.

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V SC DAS	Monitoring Project Graph	Maps and Calender Report Qu	ality Assurance Di	ata Entry Manage Invento	ry Manage Instrumer	nt MetaData Administrat	ion Index Calculation	Threshold Permit Projec	t	
Data Entry Screen Set	ир		E Contraction of the second se	rield Data Entry mport Lab Result File Activity Fish Tissue Sampling	Setup					
	DATA ENTRY		/	Jain Of Custody Activity Logger import Raw data from the Log	ION		FD	3 ELD MEASUREMEN	T	
Project*		Project Location*		mport Calibration data from th	e Logger		Activity Star	tDateTime*		
Testing Project	~	WWW-PATMH-19	1	Data Entry for Census			✓ 10/10/2024 0:	5:37 PM		t
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				11						
Instruments Verifica	ation									
Instruments						Today used		Calibration Ena	ble	
YSI, a Xylem brand ,DS5,454545,Sonde								۲		
Observation										
Cloud cover (No Unit)*		Tide (No Unit)*		Rain	(esterday *					
Cloud cover		Tide		Select	Rain Yesterday		~			
Comments										
Comments										
									_	
				1.						
										Next Step

Figure 25 Activities tracking with observations used during this activity

Collecting Water Flow Reading

Field staff should enter all required metadata first and then add flow values for each segment of the stream's width. WQDas will automatically calculate the average flow based on the values entered by the field staff.

ooking down stream Left © Bank	Stream Total Width (ft)	Average S Stream T	tream Flow (cm/sec) otal Width
nstrument ⁷ isher Scientific,PRO DS:	Flow Through S,545646 Stream		Qualifier Code Construction
Distance from Initial Po	int (ft)	Depth (ft)	Velocity (cm/sec)
0		1.5	1.3
2		2	2.5
4		2.5	3.2
6		3	1.5
8		1.4	2.6
10		2	2.3
10		1.2	1.9

Figure 26 Water flow measurements

For Water Chemistry Samples

If the project manager has defined water chemistry samples for collection, the screen will automatically generate barcodes for each individual sample. Field staff can print and attach these barcodes to each sampling container or bottle. This screen will display all metadata related to each collected sample, ensuring that field staff understands all requirements. Additionally, field staff can add comments or select flags as needed.

ita Entry Screen	alloction	2 MATER SAMPLE CO Import Raw Import Cable Data Entra 6	cesuit File Tissue Sampling Setup stody ger atian from the Logger ation data from the Logger r Census.	3 LD MEASUREMENT	4 FISH TISSUE
Depth Name*	Sampling Depth (ft) *	Habitat Asset	ssment		
Select Depth		Select Type	<u> </u>		
Water Chemistry	Glass Vail	Conection Equipment Grab Sample	Comments	Qualifier Code ✓ Select Qualifier Code	~ (a)

Figure 27 Water sample collection

For Field Measurement

This screen will display all parameters defined by the project manager in the "Project Characteristics" section for "Field," along with all associated metadata. Analytical method codes will be automatically generated based on the instruments used by the staff that day.

To minimize typing errors, users are required to enter the same value three times. Additionally, users can create multiple profiles by clicking the "Add New Profile" button. For each profile, it is necessary to select both "Activity Type" and "Depth."

ita Entry Screen S Data E	NTRY t	2 WATER SAMPLE CC	Import Lab Result Fil Activity Fish Tissue S Chain Of Custody Activity Logger Import Raw data from Import Calibration dat Data Entry for Census Habitat Assessment	ampling Setup TELD MEAS the Logger a from the Logger	SUREMENT	4 FISH TISSUE	id New Profile
Depth Name* From Surface	Sampling Depth (ft) *	Activity Type* Sample-Routine	~	Instrument* YSI, a Xylem brand ,DS5,454545	~		S LID BIG
Project Characteristic(unit)*	7.7 7.7	7.7	Average Value	Analytical Method APHA 3500-CA(B)	Qualifier Code Select Qualifier Code	Comments Comments	
							Û

Figure 28 Data entry for Field Measurement

For Fish Tissue Samples

Field staff can enter basic metadata on this screen, including details such as the type of ramp, ramp condition, ramp access, survey method, and site width and depth, as well as the type of shocker used.

/@D.ss	Monitoring Project Graph Maps and Calender Re	port Quality Assurance Data Entry Manage Investory Manage Instrument Metal	Data Administration Index Calculation Three	shold Permit Project	6
Data Entry Screen Setup		Field Data Entry Input Lab Renth File Activity Fish Tissue Sampling Setup			
DATA ENTRY	WATER SAME	Chain Of Costody PLE COLLECTION Activity Logger FIE Import Raw data from the Logger	3	4 FISH TISSUE	
Project"	Project Location*	Import Calibration data from the Logger Data Nature for Comm		Activity StartDateTime*	
Tan Junita Project	V SERTINGE	Habitat Assessment		V 30/2024/02/46 ANC	
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		<i>A</i>			
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Instruments			Today used	Calibration Enable	
/SI, a Xylem brand ,DSS,454545,Sonde			0	۰	
Observation					
Cloud cover (%8)*	Tide (%)*	Rain Vectorday *		_	
Jood caver	Tak	Select Rain Yesterday		~	
Jeenments Comments					
		A.			
Fish Tissue					
The second se	Ramp Condition*	Ramp Access*		Survey Method*	
raub monumera.	to Delant Parent Condition	✓ Select RampAccessed		 Select Survey 	
kanp intormation" Select Ramp Info	- Jeer May Controls				
Andy international SelectRomp.Info	Site Depth (#) *	Stocker		Net	

Figure 29 Data entry for Fish tissue samples

After entering all the metadata, field staff will begin adding fish information, including the fish name, length, weight, gender (if known), and any anomalies for each set of composite samples. The system will automatically generate barcodes for each composite sample and calculate averages for each set. While the recommended number of fish is five, it is also acceptable to have fewer than five samples.

← → C C wqdas.com/DataEntry/Index				Q \$	D N
W@D&S Monitoring Project Graph Maps an	I Calender Esport Quality Assurance Data Entry Manag	a lavenny Manage Instrument MetaData Administration	Index Calculation Threshold Permit Project		6
Data Entry Screen Setup DATA ENTRY DATA ENTRY	Pick Data Bary Input Lab Routh Tar Cann Of Canady Active Jungar Lagar Lagar Lagar Lagar Lagar Celabratin dat Lagar	sauging Semp B the Logger In these the Logger	NT	FISH TISSUE	
Fish Tissue Chain of Custody Form	Data Entry for Central Habitat Assessment				Add New Profile
Fith Name* Sample Asstrop* Tuberson (2m;73a) Tuberson (2m;73a)	Activity Type*				
Longtrass* Weight rass* Example and the second secon]				
SeegleD* Lengt With Euse*	Weight With Unit"	Sea*	Diceax Observed Black Spot V	Comments v	
SeepleD Length Web Tail	Weight With Unit	Sex Uslamm v	Diseas Observed Select Observed Disease V	Comments	
SeepleD Length With Unit	Weight With Unit	Sex Utilizen v	Diseas Observed Secies Observed Disease v	Comments	
SaujaD Lauja Wa Usi 4 [1]	Weight With Unit	Sec Temás v	Diseas Observed Select Observed Disease v	Comments	
SmpldD Largh With Dat	Wingde With Cluit	Sex Main v	Disess Observed Select Observed Disease v	Comments	
Persone					Save Clar

Figure 30 Fish sample details

Users can view details about fish tissue composite samples by clicking on "Activity Fish Tissue Sampling."

D45	Screen	Monitoring Pro	ject Oraph Maps and Calender Report Qu	ality Assurance Data Entry Mana Field Data Entry Import Lab Result Fi	ge Inventory Manage Instrumen	t MetaData Administratio	on Index Calculation Threa	old Permit Project		
iet ct Project lest All Deselect all	@ Eacel		Projet Location	Activity Fail Tissue Class Of Custody Activity Legger Import Raw data fee Import Calibration d Data Entry for Centry Hobitat Amesiment	a the Logger at freem the Logger a		v Apply Filter Com			Search
Project Nam	ne 🤃 Location I	Name ActivityStartDateTime	ResultQualifier CodeName	† Equipment † Ran	uplato 🕴 Ramp Acce	s 🕴 Survey Metho	d 🕴 SkeWidth	0 WidthUnit	0 SiteDepth	DepthUnit Comments
Fish Tissue P	Project DRAGON	WOATS 10:10:2024 05:46:PM		W2	i Life Large Boat	Survey1	3		3	
Fish Tissue F	huject DRAGON	WOATS 09/03/2024 12:59:394		Pat	ic Large Boat	Survey1	3		- 44	
rcade	Sample ID	Fish Name	Activity Type Name	Length	Longth Unit	Weight	Weight Unit	Center	Anomalies	Crossrets
29	1	Espolidellidae Leeches	Sample-Routine	23		3	1	UnKnown	Orowths Cysts	
29	2	Erpobdellidae Leeches	Sample-Routine	6	28		:	UnKnown		
229	3	Erpobdellidae Leeches	Sample-Routine	đ	an a	3	:	UaKnown		
4229	4	Erpobdellidae Leeches	Sample-Routine	7		4	1	Female		
4229	5	Erpobdellidae Leeches	Sample-Routine	7	an l	5	1	Male		
ummary	No Of Samples: 5			Average Length:	5.66	Average Weight3.90				
4230	1	Uenoidae Stonecase caddisfly	Sample-Routine	7	CER	đ	8	Male		
4230	2	Uenoidae Stonecase caddisfly	Sample-Routine	1	cm	6	1	Male		
4230	3	Uenoidae Stonecase caddisfly	Sample-Routine	7	cm	3	5	UnKnown		
4230	4	Umoidae Stonecase caddinfly	Sample-Routine	9	cm	5	:	Female		
k230	5	Usnoidae Stonecase caddinfly	Sample-Routine	4	ca	8	ł.	UaKnown		
lummary	No Of Samples: 5			Average Length:	7.00	Average Weight5.60				
4231	1	Teleostei Ray Fish	Sample-Routine	11	cm	4	1	UaKnown		
4231	2	Teleostei Ray Fish	Sample-Routine	5	cm	6	8	UsKnown		
4231	3	Teleostei Ray Fish	Sample-Routine	13	cm	9	5	UaKnown		
4231	4	Teleostei Ray Fish	Sample-Routine	11	cm	7	1	Male		
		Talaoutai Ray Dish	Sample-Routine	15	ca	9		Female		

Figure 31 Fish sample calculations for composite sample

For Water Bacteria or Chlorophyll Samples

This screen is quite similar to the water chemistry screen, allowing users to add multiple profiles for each set.

← → C 😋 wqdas.com/DataEntry/Index				९ 🛧 🖸 🛛 🛛
Data Entry Screen Setup	Maximing Project Graph Maps and Colonder Report Que	alty Annexos Don Earry Monago Investory Manago Instrument MonChen Park Dava Rangy Menty Tele Talan Sanaging Sangy Calai Of Calaidy Annexos Lagge Taiget Raw da Sana Ku Lagge Taiget Raw da Sana Ku Lagge	Admainstein John Calculation Theohold Pousi Poyiet	CLD MEASUREMENT
Water Sample Collection Data Nume* Sampling Data (Supplice) * Sampling Data >	Nys*) [Siden Type	Data Entry for Crease Holder Assessment		Asserte
Isaqué Tedy C Bartine Catalian Water Chemistry E ar Vill Isaqué Dedy C Bartine Catalian Bartine Bartine Bartine Catalian	Cuberios Equipanes Ordo Saraja Cuberios Equipanes Discussara Otor	Cissadi Cissadi	Qualitier Code v Sales: Qualifier Code Qualifier Code v	
				Protein Nam Say

Figure 32 Chlorophyll sample and Bacteria sample auto generated barcodes

For Census Projects

For BIBI or FIBI score calculator projects, field staff can select the project name from the dropdown and start adding the metadata. The subsequent screen will populate according to the chosen BIBI or FIBI project, enabling staff to enter all necessary metadata before they begin counting macroinvertebrates or fish.

→ C	wqdas.com/DataEntryCensus/Inc	dex								Q	☆ ひ	
@Das		Monitoring Project Graph	Maps and Calender Report Qu	ality Assurance Data Entry Mara	ge Inventory Manage In	strument MetaData Admin	istration Index Calculation Three	shold Pemit Pr	ije.1			
ata Entry For Ce	nsus			Field Data Entry Import Lab Result F Activity Fish Tissue Chain Of Custody	ile Sampling Setup			- 2				
	1	PROJECT LOCATION		Activity Logger Import Raw data fro	n the Logger			METADATA				
Project Location				Import Calibration d Data Entry for Cena Habitat Assessment	ata from the Logger							_
Project*		Project Location*			Location Region			Team*				_
2-81 Scare Project		✓ WWW-690N-57		v	Piedmont			Team A				_
doratory		Activity StartDateTime*			Qualifier Code							
ivesity Lab		✓ 10/11/2024 10:21 PM		0	Select Qualifier Code			×				
nnet					_							
ana anta												
					2						_	
											2	Nes
act		Project Location*		Team		Trom Date						-
ct Project		✓ Select Location		v Select Tenn		✓ mm dd yyyy		Apply Fill	Car			
iect All Deselect all Deselect all											Search:	
vject	Project Location	+ Team	n Name 🕴 A	ctivity Start Dale Time	÷	Qualifier Code	Total Bie Mass	4	Metadata	Cesso	4 Action	
BE Score Project	WWW-PATMH-SC (Highland)	Team	a A 01	1/20/2024 09:20:AM					۲	67	20	
II Score Project	WWW-GW27-49 (Piedmont)	Tearr	1A 0	5/17/2024 09:20 AM					۲	100		
II Score Project	WWW-GW2N-57 (Piedmont)	Team	A 0	3/13/2024 09:20:AM					۲	76	20	
I Score project	WWW-GWN-49 (Piedmont)	Tear	A 0	9/12/2024 11:09:AM		Construction	12 g	2	۲	43		
	WALKS, BUTS ALL WW (Disklass 6)							_				
BI Score project	www.www.www.www.unganana)	Tearr	1B 0.	5/05/2024 10:05:AM			24 g		۲	20		

Figure 33 Census data entry for BIBI or FIBI projects

The next screen focuses on the remaining metadata, including details such as the type of nets used for today's activity and the equipment being utilized.

← → ♂ 😳 wqdas.com/DataEntryCensus/Index						९ 🛧 🖸 🕚 🗄
W@Das states and states	fonitoring Project Graph Maps and Calender Report Qualit	ty Assurance Data Entry Manage Inventory	Manage Instrument MetaData Administr	ration Index Calculation Threshold P	emit Project	(a) •
Data Entry For Census						
PRO	D JECT LOCATION			2 METAI	DATA	
Metadata (BUG)				_		
Activity Type*	Ist Net (Dip Net)*	2nd Net (Block	: Net)*	E	çuipssest	
Sample Routine	Doot 540 540 18334460	Black Stet 0.5	0.5 to 334467	~ 12 N	Introduck 6 volts 334457	
4	75	1		1	2	
BDS Sampability Code *	Bottom Visible In all Areasoffeg*	Same water o	INTRY KOODE 2*			
Sexpletile	 Ув 	~ <u></u> \%		×		
Contracts						
		le le				
Person						im

Figure 34 Data entry for BIBI and FIBI metadata

After saving the metadata, field staff can add counts for the bugs or fish. They can select names from a dropdown menu and specify the number of individuals caught. Additionally, they have the option to include or exclude certain entries from the calculations. Field staff can also take pictures or preserve samples for later reidentification. To view previously entered information for all activities, they can click on the "eye" icon.

← → C 🖙 wqda:	s.com/DataEntryCensus/Index							☆ ひ 0
Water Quality Data Acquisition Solution								
Monitoring Project	Graph Maps and Calender R	eport Quality As	surance Data Entry Ma	nage Inventory Ma	nage Instrument MetaD	ata Administra	tion Inde	x Calculation
			Th Field Data Entry					
E			Import Lab Result	File				
			Activity Fish Tiss	ue Sampling Setup				
Data Entry	For Census		Chain Of Custody					
Data Entry	FOI CONSUS		Activity Logger					
			Import Raw data	from the Logger				
Project	Project I	location*	Teat Import Calibration	a data from the Logger				
Select Project	V Select Lo	ocation	✓ Sele Data Entry for Ce	nsus		oply Filter Clear		
			Habitat Assessme	nt				
Select All Deselect	t all Excel		_			Sea	urch:	
Show 10 v entries								
Project	Project Location	Team Name 🔶	Activity Start Date Time	Qualifier Code	🗧 Total Bio Mass 🍦	Metadata	Census 🛔	Action \Rightarrow
BI-BI Score Project	WWW-PATMH-SC (Highland)	Team A	03/20/2024 09:20:AM			۲	67	
BI-BI Score Project	WWW-GWN-49 (Piedmont)	Team A	03/17/2024 09:20:AM			۲	100	
BI-BI Score Project	WWW-GWN-57 (Piedmont)	Team A	03/13/2024 09:20:AM			٢	76	

Figure 35 Detail for BIBI and FIBI data

Field staff can enter information for any bug or fish by clicking on the census number and selecting a new entry from the dropdown list.

← → G 😴 wdq	as.com/Data	EntryCensus/Index										☆ む 🕹 🕚
Witter Guilling Data Acquisition Solution Monitoring Project	Cens	us Details									× 1	ndex Calculation
	Ma	nage Entries									Ŧ	
Data Entr	Taxon Na	g Name	Ano V Sele	maly et Anomaly	✓ Apply F	ilter Clear						+
Project Select Project	Select A Show 10	II Deselect all Excel							Search:			
Select All Desch		Taxon Name	Total Catch	Pass Number	Anomaly	Exclude	Reidentified	Preserved	Comments	Action		
Project		ATTENELLA	23	2	Fin Erosion	N	Y os	Yes Image				
BI-BI Score Projec		BRANCHIURA	5	2		No	No	No				
DIDIO		COLEOPTERA	19	2		No	No	No				
BI-BI Score Projec		ODONATA	8	2		No	No	No				20
BI-BI Score Projec		ODONTOCERIDAE	5	2		No	No	No				20

Figure 36 BIBI or FIBI individual entry

For more details, please refer to this screen.

← → C 5 wdda	s.com/DataEntryCensus/Index	☆ 단 🕹 🕔 :
Water Guilding Dass Acquidition Solution	Census Details	× Index Calculation
(a) +	Manage Entries	
Data Entr	Taxon Name* Total Catch* Pass Number* External Anomaly Exclude* Reidentified* Preserved* Select Bug Name Select Anomaly <td< th=""><th>+</th></td<>	+
Project Select Project	Comment Save Clear	
Select All Desele		



Habitat Assessment

Field staff can enter the habitat assessment data by selecting the project name from the dropdown menu.

← → C 😁 wqdas.com/DataEntry/BiologicalAssessm	nent		ବ 🌣 ପି 🔕
WIEDAS Water Guarling Data Acquicitions Foldman			
Monitoring Project Graph Maps and Calender Repor	rt Quality Assurance Data Entry Manage Field Data Entry	2 Inventory Manage Instrument MetaData Administration Index Calculation	Threshold Permit Project
Habitat Assessment Entry	Import Lab Result File Activity Fish Tissue Sa Chain Of Custody Activity Logger BIOLO Import Raw data from Import Calibration data	s ampling Setup2 the Logger ABITAT DATA SHEET a from the Logger (SUMMER)	
Project* Habitat Assessment Project	Project Location* WWW-PATMH-SC Data Entry for Census	Season*	~
Team*	Activity StartDateTime*	Qualifier Code	
Select Team V	mm/dd/yyyy:	Select Qualifier Code V	
Comments			
			Next Step

Figure 38 Habitat project data entry

After entering all metadata, field staff will begin inputting values for the left or right side of the stream bank and documenting all stream conditions in the sheet. Guidance for the criteria can be accessed by clicking the "?" icon next to each row label. Staff can also add water flow readings and depth for different segments by clicking the "Add New" button in the bottom section.

- → C 💼 wqdas.com/Da	taEntry/BiologicalAsses	sment						ବ 🖈 🖸 🔕
V@D#S	Monit	oring Project Graph Maps and	Calender Report Quality Assurance	Data Entry Manag	t laventory Manage Instrument MetaData Administration	Index Calculation Threshold	Permit Project	0
Habitat Assessment Entry			BIOLOGICA	Field Data Entry Import Lab Result Pile Activity Fish Tissue 5 Chain Of Cuctody Activity Logger Import Raw data from Import Calibration dat Data Entry for Census				
Habitat Data Sheet	Bank	Erosion		Habitat Assessment		Habitat A	ssessment	
Left Bank Extent (m)		Extent (m)	Right Bank	E	Instream Habitat (0-20) 🕠	Enter Instream Habitat		
Enter Extent Security		Enter Extent Severity			Epifaunal Substrate (0-20) 😧	Enter Epifaunal Substrate		
None	~	Nana	~		Velocity Depth Diversity (8-20) 😧	Enter Velocity/Depth Dovenity		
Average Height		Average Height Aug Height			Pool Glide Eddy Quality (8-20 😧 Pool Glide Eddy Extent (m)	Enter Pool Olide Eddy Quality		
	Bar Formati	on & Substrate			Riffle Run Quality (0-20)	Enter Riffle Run Quality		
Cobble Severity		Sand Severity			Riffle Run Extent (m)	Enter Riffle Run Extent		
Gravel Severity	÷	Silt/Clay Severity	÷		Embeddedness (%)	Enter Embeddedness		
Nate	~	Note	~		Shadding (%)	Enter Shadding		
				Stream 0	Character			
Braided	Riffle		Run Glide		Deep Fool	Shallow Pool		Gravel
Abant	 Abset 	~	About	~	Abant V	Absatt	v	Abatt v
Sand Abuet	 She Chay Abset 	~	Cobble	×	Bedrock Abser	Boulder >2m	v	Bealder <2m
Beaver Pond	Overhead Cover		Undercut Bank		Orange Floc	·		
Abset	~ Abset	~	Abset	Ý	Abant v]		
				Wood	Debris			
No. of Instream Woody Debries		No. of Dewatered Woody Debries			No. of Instream Rootwads		No. of Dewatered Rootwads	
Instream Woody Debries		Dewatered Woody Debries			Instream Rootwads		Dewatered Rootwads	

Figure 39 Habitat project metadata entry

Nama		2	Ness]		AMINUATUR RATER (III)	L	Enter Kime/Kun Extent		
INCIDE			Ivone			Embeddedness (%)	[Enter Embeddedness		
Gravel Severity			Slit/Clay Severity			Shadding (%)	ſ	Enter Shadding		
INCIDE			None							
					Stream C	Character				
Braided		Riffle		Run/Glide		Deep Pool		Shallow Pool	Gravel	
Absent	~	Absent	~	Absent	Ý	Absent	~ [Absent 🗸	Absent	Ý
Sand		Slit/Clay		Cobble		Bedrock		Boulder>2m	Boulder <2m	
Absent	~	Absent	~	Absent	~	Absent	~ [Absent 🗸	Absent	~
Beaver Pond		Overhead Cover		Undercut Bank		Orange Floc				
Absent	~	Absent	~	Absent	~	Absent	~			
					Wood	Debris				
No. of Instream Woody Debries			No. of Dewatered We	ody Debries		No. of Instream Rootwads		No. of Dewatered R	lootwads	
Instream Woody Debries			Dewatered Woody Debri	15		Instream Rootwads		Dewatered Rootwads		
		De	pth	_		_		Flow		
					Add Water Depth					Add Water Flow
Wetted Width ()		Thalweg Depth ()	Tha	weg Velocity ()	Action	Distance from Initial Point ()		Depth ()	Velocity ()	Action

Figure 40 Habitat data entry for each section including Depth and flow

Import Lab Results

Staff can import Excel sheet results into WQDas using a downloadable template \checkmark from the import screen. After formatting the lab results in this template, users can upload it to WQDas by clicking the "+" sign and selecting "Save the Excel" file. WQDas will validate all metadata before saving the file. If any errors are detected, the affected row will turn red, while valid rows will turn green. Users will only be able to save the file when all rows are green. The system will validate the location name, sampling date, and barcode generated during the field data entry process. If the data is verified, it will be saved; if not, a message will prompt the user to reconfirm the information. The lab manager can upload files using their credentials.

← → C (=5 wqd	as.com/DataEntry	//ImportR	leport										९ 🕁	Ď	N	:
	Monitoring Project	Graph	Maps and Calender	Report	Quality Assurance	Data Entry	Manage Inventory	Manage Instrument	MetaData	Administration	Index Calculation	Threshold	Permit Project			•
						Field Data 1	Entry									_
🖹 Import File						Import Lab	Result File					— Г	Save Fr	cel Data		I.
Import The						Activity Fis	sh Tissue Sampling Setu	P							-	1
						Chain Of C	ustody									
						Activity Lo	egger									
						Import Raw	v data from the Logger									
						Import Cali	ibration data from the Lo	ogger								
						Data Entry	for Census									
						Habitat Ass	sessment									

Figure 41 Importing lab results from excel sheet

← → C 🕲 wqdas.com/DataEntry/ImportReport	۹ 🖈 ک	ን 🛨 📵
WOODAS Monitoring Project Graph Maps and Calender Report Quality Assurance	e Data Entry Manage Inventory Manage Instrument MetaData Administration Index Calculation Threshold Permit Project	•
E Import File	Field Data Entry Import Lab Result File Activity File Tassee Sampling Senip Chain Of Custody Activity Logger Import Raw data from the Logger Insport Cabakerian data from the Logger Data Entry for Census Habitat Assessment	dDan 🛓 🖬
JON35022.cv LLTZ CMC Energing C And a NO Territor Marine 21 VLLT CMC	Tet. NX British Andrew Br	

Figure 42 How to import lab results from excel sheets with validation

Import Continuous Logger Raw Data

On this screen, the user can upload a file extracted from the instrument containing all the <u>Raw</u> data.



Figure 43 Importing Logger raw data

Import Continuous Logger Calibration Data

On this screen, the user can upload a file extracted from the instrument containing all the <u>calibration</u> data.

Monitoring Project	Graph Ma	ps and Calender	Report	Quality Assu	rance	Data Entry	Manage Inventory	Manage In	strument	MetaD	ata	Administratio	n In	dex Calc	culation	Threshold
						Field Data E	Entry									
						Import Lab	Result File									
linpor	t Calibra	tion Data	Fron	The Lo	ogge	Activity Fis	h Tissue Sampling Setu	р								
					88	Chain Of Cu	istody									
						Activity Log	gger									
Start Date			End Da	te		Import Raw	data from the Logger									
mm/dd/yyyy		-	mm/dd/y	ууу		Import Calib	bration data from the Lo	ogger								
		Select all Des	elect all	Excel		Data Entry f	for Census						Search:			
Show 50 v en	tries					Habitat Asse	essment									
Calibration Sta	rt Date Time	+	Sensor Nai	ne 🔶	Seria	l Number	🕴 Unit Name	¢ R	7 🔶	OLD	•	NEW 🕴	SRF	•	STATUS	•

Figure 44 Importing continuous Logger calibration data

On this screen, users can view the details of the calibration file imported into WQDas from the logger.

Monitoring Project Gra	ph Maps and Calender Report Qual	lity Assurance	Data Entry Mana	ge Inventory Manage Instrument	MetaData	Administration	Index Calculation	Threshold Perr	nit Project
Import Calibration Data F	rom The Logger								
art Date	End Date mm:645yyyy Select all Deselect all Excel]				Search	h:
alibration Start Date Time	Sensor Name	🔶 🛛 Serial Nu	mber	Unit Name	RV	OLD	NEW	• SRF	STATUS
	Temperature, water		6504	deg C	1.67	156	0	0	0
2024-08-02 11:46:00				44.0	0.14	50.03	50	100	Done
2024-08-02 11:46:00 2024-08-02 11:46:00	Temperature, water	J I	6504	deg C					
2024-08-02 11:46:00 2024-08-02 11:46:00 2024-08-02 11:46:00	Temperature, water Turbidity	J [6504	NTU	0.02	0.56	0	0	0
2024-08-02 11:46:00 2024-08-02 11:46:00 2024-08-02 11:46:00 2024-08-02 11:46:00 2024-08-02 11:46:00	Temperature, water Turbidity Turbidity		6504 6504 6504	NTU NTU	0.02	0.56 97.77	0	0	0 Done
2024-08-02 11:46:00 2024-08-02 11:46:00 2024-08-02 11:46:00 2024-08-02 11:46:00 2024-08-02 11:46:00	Temperature, water Turbidity Turbidity Turbidity Turbidity	J (6504 6504 6504 6504	NTU NTU FNU	0.02 0.14 0.03	0.56 97.77 0.56	0 100 0	0 100 0	0 Done 0

Figure 45 Details about Logger calibration data

Activities List

Each row represents a site visit, containing all the information collected on that specific date. To view details about any activity at a particular location, users can click the "eye" icon. This will open a popup that displays additional information, allowing users to review each item one by one.

- > C 😁 wqda	as.com/DataEntry/Inde	ЭX								२ ☆ 🖸	1 🕹 🔕
WODAS M	Ionitoring Project Grap	h Maps and Caler	ader Report Quality Assuran	ce Data Entry Ma	age Inventory Manage	Instrument MetaDa	ta Administration	Index Calculation	on Threshold	Permit Project	0
Data Entry Scr Project Select Project	een Setup	Proj ~)	ect Location*	Field Data Entry Import Lab Result Activity Fish Tissa Chain Of Custody Activity Logger Import Raw data fi	File ie Sampling Setup rom the Logger	From Date		Apply Filter	Clear		+
Select All Deselect all R Show 10 - entries	Excel	Team Name	Activity Start Date Time	Import Calibration Data Entry for Cer Habitat Assessmen	data from the Logger isus it	Water Flow	Instrument	Obervation	Measurments	Search:	Action
Fish Tissue Project	DRAGON WOATS	Team A	10/10/2024 05:46:PM	Quanta Com		0		S	1		
Tidal Profiles 2013-2023	WWW-PATMH-06	Team A	10/03/2024 01:59:PM			80	1 0 Ø	0	5	0	
Non Tidal 2013 -2023	WWW-JON-32	Team A	09/17/2024 01:58:PM			0	7a 3	•	7m 3	⊛ ±	× 🔳
Fish Tissue Project	DRAGON WOATS	Team A	09/17/2024 12:47:PM			0	(**) (*)	() ©	(1) (0)	••• *	
Fish Tissue Project	DRAGON WOATS	Team A	09/03/2024 12:59:PM			60	•	5 0 ©	6	60 ®	

Figure 46 Activities tracking

For Instruments Used

For instruments used during this activity

←	\rightarrow	a (•• wqdas	s.com/DataEntry/Ind	ex									९ ☆ 🖸	I 🛧 N
	/ 🔅 D	AS ten Salution	Mo	nitoring Project Grap	h Maps and Ca	alender Report Quality Ass	surance Data Entry M	lanage Inventory	Manage Instrument	MetaData	Administration	Index Calculation	Threshold	Permit Project	
	Data	Ent	ry Scre	en Setup											÷
	Project Select P	roject				'roject Location*	Team		From Date	, 7	c	Apply Filter C	lear		
	Select Show 1	All Dese	loct all 🕅 E	xcel			Instruments U	sed						Search:	
	Projec	t	÷	Project Location	Team Name	Activity Start Date Time				low 🕴	Instrument 0	Obervation	Measurments	0 Barcode 0	Action 0
	Fish T	ssue Proje		DRAGON WOATS	Team A	10/10/2024 05:46:PM	Instruments	Today used	Calibration Enable		Ya ©	Ya	9 0 ©	Ver ®	
	Tidal F	rofiles 20	13-2023	WWW-PATMH-06	Team A	10/03/2024 01:59:PM	YSI, a Xylem brand DS5 454545	۵			Ya ©	0	5 0 Ø	60	
	Non T	dal 2013 -		WWW-JON-32	Team A	09/17/2024 01:58:PM			Close		1 0 ©	•	Va	۳۵ ® خ	
	Fish T	ssue Proje	ct	DRAGON WOATS	Team A	09/17/2024 12:47:PM			0		Ya ©	10	¥m ©	۳ ۵ ۲	
	Fish T	ssue Proje	et	DRAGON WOATS	Team A	09/03/2024 12:59:PM			80		10 ©	30 ©	Ya	va ©	20
	Tidal I	0ata 2009-	2023	WWW-PATMH-02	Team B	08/27/2024 10:50:AM	Excessive Vegetation		8		80 ©	8	¥# ©	80	

Figure 47 Activities tracking with instruments used during this activity

For Observations Screen

Users can click the eye icon to view the popup for this date.

÷ -	÷	9 😑 wqda	s.com/DataEntry/Ind	9X										९ ☆ ⊅	* N
Water Cowbity Da		S M	onitoring Project Grap	h Maps and Cale	ader Repo	rt Quality Assura	nce Data Entry	Manage Inventory	Manage Instrur	nent MetaData	Administration	Index Calculation	n Threshold	Permit Project	۰ (ھ
D	ata]	Entry Scre	een Setup												•
Pr	oject lect Proje	set		Pro	ject Location*		Team		From mm	m Date /66/yyyy		Apply Filter	Clear		
Sho	elect All	Deselect all 🕅 I	laced		0	bservation	Information	n						Search:	
Р	roject	+	Project Location	Team Name	Activ	oud cover*	Tide*		Rain Y	esterday *	e 🔿	Obervation	Measurments	0 Barcode 0	Action 0
F					10/10		3		Yes		~	Yes	Yes	Yes 👁	20
	dal Drai		WWW DATAJE OK	Turn A	1000	omments						•		*	20
	dai Fioi		www.paramoo	ream A	10.03								•		
N	on Tidal		WWW-JON-32	Team A	09/17						_	80	Yee C	Sa @	
F	sh Tissu	ue Project	DRAGON WOATS	Team A	09/17	-	_	_	_	_	Close	Via O	Vin ©		20
F	sh Tisst	ie Project	DRAGON WOATS	Team A	09/03/2024	12:59:PM				80	¥ n	Via ©	50 ©	%	
т	dal Dati	a 2009-2023	WWW-PATMH-02	Team B	08/27/2024	10:50:AM	Excessive Vegetati	ion		60	6	60	10 ©	0	

Figure 48 Data entry for Observations

For Field Measurements

Users can click the "eye" icon to view the popup for this date.

~	→ C (≌ā wqdas.	.com/DataEntry/Ind	ex										९ 🕁	🖸 関
		Mor	aitoring Project Grap	oh Maps and G	Calender	Result Cher	nistry Details				istration	Index Calculation	h Threshold	Permit Project	۰ (ھ)
l	Data Enti	ry Scre	en Setup			ActivityTypeName	ProjectCharacteristicName	ResultMeasureValue	RelativeDepthName	Samplin					+
	Project				Project Loc	Sample-Routine	рН	s	From Surface	0.2					
	Select Project											Apply Filter	Clear		
	Select All Dese Show 10 • entri	dect all 🔀 Ex	cet			Sample-Routine	Temperature, water	3	From Surface	0.2				Search:	
	Project	+	Project Location	Team Name	• Act	Sample-Routine	Specific conductance	33	From Surface	0.2	nt ()	Obervation 0	Measurments	0 Barcode 0	Action
	Fish Tissue Proje	ct	DRAGON WOATS	Team A	10/1							*	80	60 (
						Sample-Routine	Salinity	33	From Surface	0.2				*	
	Tidal Profiles 201				10/								Yes Tes		_
	Non Tidal 2013 -:	2023	WWW-JON-32	Team A	09/3	Sample-Routine	Depth	0.5	From Surface	0.2		80	80 ©	•••• •	
	Fish Tissue Proje	et	DRAGON WOATS	Team A	09/1	Sample-Routine	Dissolved oxygen saturation	45	From Surface	0.2		5 0 ©	6	(m) @ 	
	Fish Tissue Proje	ct	DRAGON WOATS	Team A	09.0	Sample-Routine	Dissolved oxygen (DO)	11	From Surface	0.2		Va	Sa ©	%	
	Tidal Data 2009-1	2023	WWW-PATMH-02	Team B	08/2	Sample-Routine	Phycoerythrin	2	From Surface	0.2		80	80 ©	80	

Figure 49 Details of data entry for field measurements

For all the sampling bottles or containers used for this activity.

For Sampling Container

For detailed results from the lab for each sampling bottle

←	→ C 🖙 wqdas	s.com/DataEntry/Index	c							Q	☆ ₽	1 🛨 📵
	Project 0	Project Location	Team Name 🕴	Activity Start Date Time	Qualifier Code	Stream Total Width	Water Flow 🕴	Instrument (Obervation (Measurments	Barcode 0	Action
	Fish Tissue Project	DRAGON WOATS	Team A	10/10/2024 05:46:PM			60	¥m @	Ya ©	¥m ©	••• •	
	Tidal Profiles 2013-2023	WWW-PATMH-06	Team A	10/03/2024 01:59:PM			0	¥ ©	80	¥6 ©	No	
	Non Tidal 2013 -2023	WWW-JON-32	Team A	09/17/2024 01:58:PM			60	Va ©	60	Va ©	••• •	
	Fish Tissue Project	DRAGON WOATS	Team A	09/17/2024 12:47:PM	Barcode			Va ©	Va ©	Va	••• •±	
	Fish Tissue Project	DRAGON WOATS	Team A	09/03/2024 12:59:PM	Bar Code Number	Action		Yes O	8 0 ©	Ves	••• •	
	Tidal Data 2009-2023	WWW-PATMH-02	Team B	08/27/2024 10:50:AM	11023		- 88	Yes O	80	Yes O	No	
	Tidal Data 2009-2023	WWW-PATMH-05	Team B	08/27/2024 10:44:AM	14218		- 10	¥*2	80	Yea C	80	20
	Tidal Data 2009-2023	WWW-PATMH-01	Team B	08/27/2024 10:42:AM		l i i i i i i i i i i i i i i i i i i i	Close	Yaa O	60	%	60	
	Non Tidal 2013 -2023		Team A	12/06/2023 12:00:AM			80	80		Yes	Yei 🎱	-
	Non Tidal 2013 -2023	WWW-GWN-48	Team A	12/06/2023 12:00:AM			60	•	0	Va ©	••• *	
	Showing 1 to 10 of 9,308 entries	s1 row selected							Previous 1	2 3 4	5 9	31 Next

Figure 50 Activities tracking with all barcodes generated during this activity

Results From the Lab

If a blue "eye" icon is displayed, it indicates that lab results are available for this sample; otherwise, the results are still pending from the lab.

→ C wdqa	as.com/DataEntry/Ind	ex											@ ☆	5 ¥
Project														
									80		No		80	
		Barcode	e Inform	ation										20
		Activity Typ	pe	Media	Sub	Media	Proje	ct Name		Characteristic Name	Unit Name	•		
		Sample-Rou	tine	Water	Wate	ſ	Non T	idal 2013	-2023	Total Nitrogen, mixed forms	-		80	
		Sample-Rou	tine	Water	Wate	ſ	Non T	idal 2013	-2023	Total Phosphorus, mit forms	red -	S		
		7									Close	•	8	
		Т										Yes	Tin 🎱	
									1	80	No			
														931 Next

Figure 51 Details about barcodes

←	\rightarrow	C	ea wqdas	.com/DataEntry/Inde	9X							G	< ☆ Ď	L 🕹 🚺
Winter Que	/@			nitoring Project Grap	h Maps and Ca	alender Report Quality A		anage Inventory Manage I	nstrument MetaD	Data Administration	Index Calculation	Threshold		
	Da	nta En	try Scre	en Setup										E
	Proj	ject			1	Project Location*	Team		From Date					
	Sele	ect Project] [~	mm/dd/yyyy	c	Apply Filter	Clear		
	Sel	lect All D	eselect all 🔀 E	kcel					_				Search:	
	Show	10 v er	atries				Barcode		_					
	Pre	oject	•	Project Location	Team Name	Activity Start Date Time			low	† Instrument 0	Obervation 0	Measurments	0 Barcode 0	Action 0
							Bar Code Number	Action		Yes	Ym O	Yee ©	Yes 👁	× =
							14234	Not Found			Ŭ		*	
	Tid	lal Profiles 2	2013-2023	WWW-PATMH-06	Team A	10/03/2024 01:59:PM	14235	Not Found		Ya ©	60	9m ©	80	
	No	n Tidal 2011		WWW-JON-32	Team A	09/17/2024 01:58:PM			Close	50	60	Sin O	€® @	
	Fis	h Tissue Pro	oject	DRAGON WOATS	Team A	09/17/2024 12:47:PM			0	5 0 ©	6	8 ©	**	
	Fis	h Tissue Pro	oject	DRAGON WOATS	Team A	09/03/2024 12:59:PM			60	5 00 ©	•	<u>Via</u> ©	3 ∎ ●	
	Tid	lal Data 200	9-2023	WWW-PATMH-02	Team B	08/27/2024 10:50:AM	Excessive Vegetation		60	<u>80</u>	60	Ya	80	

Results are not received from the lab yet.

Figure 52 Activities tracking with details about barcodes generated during this activity

Quality Assurance of the Data

Data Quality Checks

Quality assurance officers can verify data accuracy by running various reports. The first report is based on limits established by the project manager for each characteristic in the "Project Characteristics." If a sampling value falls outside the specified range for these characteristics, it will turn red.

/@D∧s	Monitoring Project	Graph Maps and C	Calender Report Ou	ality Assurance Data Ent	ry Manage Inven	tory Manage Ir	istrument MetaData	Administration	Index Cal	culation Three	shold Permit Projec	. 6
ity Data Acquisition Solution			Q	uality Assurance Verification								
Quality A	ssurance V	erification	Sa	mple Container Tracking								
Project Select Project		~	Location Ar	issing Barcode Prom Lab Il Sensor Results idit Result Summary A/ QC Check Setup	Cha	racteristics		~	Activity Typ Select Activ	e ity Type Name		~
From Date			To Date			_						
mm/dd/yyyy			mm/dd/yyyy		App	ly Filler Clear						
Select All Desel	ect all 🖹 Excel 🛛 C	hange Status								S	earch:	
Show 10 ~ ent	ries		1	1								
ProjectName	LocationName	ActivityTypeName	ActivityStartDateTime	RelativeDepthName	SamplingDepth	MediaName	CharacteristicsName	ResultMeasu	reValue S:	ampleFraction	AnalyticalName	Quali
Non Tidal 2013 -2023	WWW-JON-32	Sample-Routine	2024-09-17 01:58 PM	From Surface	1 m	Water (Water)	Temperature, water (deg C)	23			USFDA 3135.2I	
Tidal Profiles 2013-2023	WWW-PATMH- 06	Sample-Routine	2024-10-03 01:59 PM	From Surface	0.2 ft	Water (Water)	Temperature, water (deg C)	3			USFDA 3135.2I	
Non Tidal 2013 -2023	WWW-JON-32	Sample-Routine	2024-09-17 01:58 PM	From Surface	1 m	Water (Water)	Optical brighteners (ppm)	78			USFDA 1668A	
Tidal Profiles 2013-2023	WWW-PATMH- 06	Sample-Routine	2024-10-03 01:59 PM	From Surface	0.2 ft	Water (Water)	pH (None)	8			APHA 3500- CA(B)	
E: 1 T:	DRAGON	Comple Douting	2024 00 17 12 47 DM	F C C	2.0	W. (W.)		7			ADITA 2500	

Figure 53 Quality assurance of sampling data

The quality assurance officer can then update the record's status with a qualifier code, changing it from "Preliminary" to "Final." If the status is marked as "Invalid," a qualifier code is required to provide a reason for the invalidation. All users can export all or selected rows to an Excel file for further analysis.

> C (wqdas.com/Quality	Assurance/QualityA	ssuranceVerification	ı								২ ☆ 1	}
Data Acquisition Solution	Monitoring Project G	raph Maps and Cal	ender Report	Quality Assurance Data I	Entry Manage Invent	ory Manage Instrume	nt MetaData A	dministration	Index C	lculation	Threshold	Permit Project	R
Quality A	Assurance Ver	ification											
Project			Location		Cha	racteristics			Activity Ty	De			
Select Project		~	Location		~ (na	acteristics		~	Select Act	vity Type Na	me		~
From Date			To Date										
mm/dd/yyyy			mm/dd/yyyy		Appl	Filter Clear							
Select All Dese	elect all 👔 Excel Change	Status									Search:		
how 10 v en	ntries		1		1	l	I					1	
eristicsName	ResultMeasureValue	SampleFraction	AnalyticalName 🛡	QualifierCodeActivity	QualifierCodeLab	ActivityComments	ResultComments	Result Statu	s 🕴	IsValid		Result Qualifie Code	r
ure, water (deg	23		USFDA 3135.2I					Preliminar	y 🗸	Yes	~	Select Quali	ifier 💊
	3		TIOPPA ALCO AL										
ure, water (deg	Ĩ		USPDA 3135.21					Preliminar	y Y	Yes	~	Select Quali	ıfier ∨
righteners	78		USFDA 1668A					Preliminar	y v	Yes	~	Select Quali	ifier 🗸
	•								-		_		_
:)	0		CA(B)					Preliminar	v ~	Yes	~	Select Quali	ıfier ∨
)	7		APHA 3500-					Preliminar	y ~	Yes	~	Select Quali	ifier 💊
			(A(B)										

Figure 54 Quality assurance of data

Logger Activity Tracking

Field staff can use this screen to log all activities related to any continuous logger. All team members can view the activities occurring at this location for the logger. Field staff can also track maintenance tasks, such as whether the logger was cleaned today, calibrated, or what file name was uploaded for the raw data from the logger.

→ C	wqdas.com/Ac	tivityLogger/Index										९ ☆	ប 🔇
V CDAS	Monitoring Project	Graph Maps and	l Calender Rep	ort Quality As	surance	Data Entry Manage	Inventory Manage Instrum	ent MetaDat	a Administrati	on Index Calculation	n Threshol	d Permit Proj	ect
Logger Ac	tivity Det:	ail				Field Data Entry Import Lab Result File Activity Fish Tissue Sa Chain Of Custody	mpling Setup						÷
Monitoring Organ Select Organization	nizaton m		Project ~ Select Proj	ect		Activity Logger Import Raw data from	the Logger cation		~	Project Logger De Select Project Log	plo y ger Deploy		~
Start Date			End Date			Import Calibration data Data Entry for Census Habitat Assessment	from the Logger						
Select all Desele	ct all 🕑 Excel										Searc	h:	
Project	Project Location	InsInventory Barcode	Start Date 븆	End Date	Team	Monitoring Organization	File Name Uploaded	Is Logger There	Is Logger Cleaned	Is Logger Caliberated	Is Logger PC	Comments	Action
Continuous Logger Project	WWW- PATMH-DW	8565465	03/12/2024 05:00:PM	04/02/2024 01:59:AM	Team A	River Keepers	Hud3424.xlsx	Ye	No	8	10		
Continuous Logger Project	WWW- PATMH-DW	8565465	03/12/2024 05:00:PM	04/02/2024 01:59:AM	Team A	River Keepers	Pat3424.xlsx	Sta	10	60	10		
Continuous Logger Project	WWW- PATMH-DW	8565465	03/12/2024 05:00:PM	04/02/2024 01:59:AM	Team A	River Keepers	Hud3424.xlsx	Ves	Ne	80	Ne		
Continuous Logger Project	WWW- PATMH-DW	8565465	03/12/2024 05:00:PM	04/02/2024 01:59:AM	Team A	River Keepers	Pat3424.xlsx	No	10	1	10		

Figure 55 Activities for logger for maintenance and data download

Calibration and Precision Data

Managers can track the maintenance of all instruments used within the organization. A field staff can enter Precision check criteria and then start adding the standard and actual value to see if

instruments pass or fail the test. Users can see details about any test by clicking on the summary button.

₩ Data Augustater Soution Monitoring Project Graph Map	s and Calender Report	Quality Assurance Data Entry	Manage Inventory	Manage Instrument MetaData	Administration Index Calculation	Threshold Permit Project
		Quality Assurance Verification				
QA/QC Checks Setup		Sample Container Tracking				1
		All Sensor Results				
Inventory		Audit Result Summary			riteria "	
Select Instrument	Ť	QA/ QC Check Setup		Ý	41.4 M	
						Save
Inventory	Test Type					
Select Instrument	✓ Select Test Type		✓ Apply Filter	Clear		
Show 10 v entries						Search:
Inventory		† Test Type	() Criteria	Test Date	Action	4
		Calibration	10 %	2024-08-28	Test Summary	
YSI, a Xylem brand DS57876888 Sonde						
YSI, a Xylem brand DS57876888 Sonde YSI, a Xylem brand DS57876888 Sonde		Calibration	15 %	2024-10-10	Test Summary	20

Figure 56 Instruments maintenance record tracking

										역 ☆ 원 🕓
Mility Deta Augusteen bristom Monitoring Project Graph	Maps and Calender	Report Qual		Data Entry Manage		danage Instrument	MetaData	Administratio		lation Threshold Permit Project
QA/QC Checks Setup										l
Inventory* Select Instrument	Sensor Test	Summary	7						×	
	Show 10 v entrie	5					Sear	eh:		Save
Inventory.	¢ Inventory	Sensor	Criteria	Standard Value	Actual (Value	Result Value (+- 🕴 %)	¢ Result	Test 🕴 Date	¢ Action	
Select Instrument	YSI, a Xylem brand DS57876888	Temperature, water	15	0	0.5	-0.5 %	Pass	2024-10- 10	20	Search:
Inventory YSI, a Xylem brand D\$57876888 Sonde	YSI, a Xylem brand DS57876888	Temperature, water	15	10	11	-10 %	Pass	2024-10- 10) may 🗶 🗖
YSI, a Xylem brand D\$57876888 Sonde Showing 1 to 2 of 2 entries	YSI, a Xylem brand DS57876888	Dissolved oxygen (DO)	15	1	0.75	25 %	Fail	2024-10- 10	20	Previous 1 Next
	Showing 1 to 3 of 3 en	tries						Previous	1 Next	

Figure 57 Instruments Precision check and calibration tracking

QA/QC Checks Setup					
inventory*	Check Type*		(Criteria*	
Select Instrument	✓ Select Test Type		~		
					Save
Inventory	Create Precision Check				
Select Instrument	Precision Check for inventory: YSI, a Xylem brand DS57	876888 Sonde			
how 10 🖌 entries	Criteria is: 15 % (*<=) for this Test Inventory Sensor*	Standard Value*	Actual Value*		Search:
Inventory	Dissolved oxygen (DO) 🗸 🗸	10	10.5		
YSI, a Xylem brand DS57876888 Sonde				Save Close	nary 🖊 🖬
YSI, a Xylem brand DS57876888 Sonde					
owing 1 to 2 of 2 entries					Previous 1 N

Figure 58 Precision Check data entry

Graphs

Long Term Analysis

Graph one parameter and multiple locations

In this graph, users can select a single parameter and compare it across multiple locations. They can choose any date range for the comparison. Users can also select or deselect any parameter by clicking on the parameter name in the legend.



Figure 59 Long term analysis graph for one parameter at different locations

Long Term Analysis

Graph one Location and multiple parameter

In this graph, users can create a visual representation for a specific location to observe how different parameters interact with one another and how one parameter affects another. They can select or deselect any parameter by clicking on the parameter name in the legend.



Continuous Logger Comparison of All the Parameters at One Location

In this graph, users can create time series for continuous data at a specific location. They can select or deselect any parameter by clicking on the parameter name in the legend.



Figure 61 Continuous Logger time series for one location with all the parameters

Reports

Users can run different reports to run different statistics.

Project Activity Report

In this report, users can view the number of samples collected as "Routine" and "Quality Control Sample Duplicate" for any given year across multiple locations. This report assists in assessing whether the quality control criteria for duplicates are being met.

← → C (vqdas.com/Project/ProjectActivi	tyTypeReportingView				< ☆ ♪	N
Maintoning Project Gr	aph Mapa and Calender Report Quality Assur Activity Report e within a project ^{Project Report}	ance Data Entry Ma	nage Inventory Manage Instrument Me	taData Administration Index Calculation	Threshold Permit Project) +
Projects Tidal Profiler 2013-2023	Leartins Diplated Cock Report With Clock Report With Clock Report With Clock Report With Clock Report With Clock Report With Clock Report Report Length Norma With Clock Report Report Length Norma With Clock Report Report With Clock Report With Clock Report W	AV2 00 00 00 10 12	Years 5019	<u> </u>	eð Serck	
Project	Station Code	Years	Quality Control Sample Duplicate			
Tidal Profiles 2013-2023	WWW-PATMH-13	2019	84		697	
Tidal Profiles 2013-2023	WWW-PATMH-09	2019	77		476	
Tidal Profiles 2013-2023	WWW-PATMH-07	2019	70		727	
Tidal Profiles 2013-2023	WWW-PATMH-11	2019	60		334	
Tidal Profiles 2013-2023	WWW-PATMH-14	2019	56		635	
Tidal Profiles 2013-2023	WWW-PATMH-05	2019	49		461	
Tidal Profiles 2013-2023	WWW-PATMH-10	2019	49		452	
Tidal Profiles 2013-2023	WWW-PATMH-01	2019	42		372	

Figure 62 Report on activities at each location for one year

Project Exceedance Report

Users can run this report to obtain the total count of data points for one year, along with the counts of low and high values based on percentage criteria. If the \pm percentage falls outside the specified criteria, it will be highlighted. For example, for pH, if the acceptable low value is 6 and the high value is 8, with a $\pm 15\%$ criterion, any value outside this range will be highlighted. In other cases, users can specify one value (either high or low) as required, while the other remains optional.

Mean origing Project Origin Mage and Calles Report On Editory Manage Marching
Main Main Ser Ciercia la 49 Cierc
Preiset* Characterinitia Poplation Cocks Room MOL Room MOL Cocks Room MOL Cocks Room MOL Cocks Room MOL Room MOL Cocks Room MOL ROOM
Ead Date Min Value Min Value Criteria is 4% 1013224 3 1 1 Gassisting Calue Yare Tele Centrol (Lew plf) Cirectal palew plf) Count of High plf Percentage High plf WWW-07N-46 2014 6 0 0 0
Series
Statica Code Vara Total Count Of Lyne pH Descenting Lange pH Count Of High pH Percenting High pH WWW-WN-46 2014 6 0 0 1 2.5 WWW-WN-46 2014 6 0 0 0 0
WWW.46WN-46 2013 E 0 1 12.5 WWW.46WN-46 2014 6 0 0 0 0
WWW.4GWN-46 2014 6 0 0 0 0 0 0
WWW40W1x46
WWW-GWW-46
WWW-64WY-46 2017 10 0 0 2 20
WWW.4GWY.46
WWW.GUNY.46 2019 12 0 0 0 0
WWW.400X-44 2020 10 0 0 0
WWW.40WX-46 2021 12 0 0 2 1667

Figure 63 Report for counts for exceedance for each individual parameter over the time

Holding Time Report

In this report, users can view the number of samples that exceed the holding time criteria set by the project manager in the "Project Sample Study Plan." The report calculates the difference between the sample collection date and time and the analysis start date and time. If this difference exceeds the holding time criteria, it will be highlighted.

- > C	wqdas.com/reports/Ho	ldingTimeReport							९ 🖈 🖸 🛛
WODAS Saulty bes keyddias banten	Monitoring F	roject Graph Maps and Ca	lender Report Quality Assurance	Data Entry Manage	Inventory Manage Instrument	MetaData Admin	istration Index Calcula	tion Three	shold Permit Project
🔓 Highlight a	ny sample which	is above the holdin	Activity Report Project Report Holding Time Report						÷
Project *	_	Sample Stu	Duplicate Check Report		Location		Se	ction	
Tidal Data 2009-2023		Water Che	mistry Report Logger Moving Avg	~	× DRAGON WOATS × S	CIENCE CENTER	s	elect Section	۲
					×WWW-PAIMH-01 ×V	WW-PATMH-02			
					×WWW-PATMH-03 ×V	WW-PATMH-04			
					×WWW-PATMH-05 ×V	WW-PATMH-08			
Depth	1	Start Date			End Date				
From Surface		~ 04/13/2010		٥	10/13/2024		•	Q Search	Clear
Select All Deselect all	Excel								Search:
Show 10 🗸 entries									
Project Name	A Location Name	Sample Study Name	Project Section Name	Relative Depth Name	Activity Date	Analysis Date	Holding Time	Unit	Holding TimeDifference With Analysis
Tidal Data 2009-2023	SCIENCE CENTER	Water Chemistry	Gwynns Falls Tidal Section	From Surface	2021-06-16	2021-06-28	28	days	12
Tidal Data 2009-2023	SCIENCE CENTER	Water Chemistry	Gwynns Falls Tidal Section	From Surface	2021-07-01	2021-07-13	28	days	12
Tidal Data 2009-2023	SCIENCE CENTER	Water Chemistry	Gwynns Falls Tidal Section	From Surface	2021-07-07	2021-07-19	28	days	12
Tidal Data 2009-2023	SCIENCE CENTER	Water Chemistry	Gwynns Falls Tidal Section	From Surface	2021-07-21	2021-08-02	28	days	12
Tidal Data 2009-2023	SCIENCE CENTER	Water Chemistry	Gwynns Falls Tidal Section	From Surface	2021-08-11	2021-08-23	28	days	12
Tidal Data 2009-2023	SCIENCE CENTER	Water Chemistry	Gwynns Falls Tidal Section	From Surface	2021-08-19	2021-08-31	28	days	12
Tidal Data 2009-2023	SCIENCE CENTER	Water Chemistry	Gwynns Falls Tidal Section	From Surface	2021-09-02	2021-09-14	28	days	12
Tidal Data 2009-2023	SCIENCE CENTER	Water Chemistry	Gwynns Falls Tidal Section	From Surface	2021-11-10	2021-11-22	28	days	12

Figure 64 Holding time report

Duplicate Check Report

In this report, users can compare duplicate samples with routine sample results. Results that fall within the specified range are deemed acceptable; otherwise, they will be highlighted. Users must input acceptable low and high range values.

- → C == wqdas.com	/reports/ReportDuplicateCheck						ବ୍	. ☆ 산 🕓
₩@D*5 Comparison report l	Monitoring Project Graph Maps of	and Calender Report Quality Ar Activity Report Project Report Holding Turn Report	ssurance Data Entry Man	age laveatory Manage lastrum	eent MetaData Administra	iion Index Calculation Thresho	ld Permit Project	® +
Project * Tidal Profiles 2013-2023	Chai V Dis:	racteristic * Duplicate Check Rep MDL Check Report	ort V	Location X DRAGON WOATS	× SCIENCE CENTER	Depth Select Depth		
·		Report Logger Movie	ag Avg	× WWW-PATMH-01 × WWW-PATMH-03	× WWW-PATMH-02			
Start Date	End	Date		Low Percentage		High Percentage	_	
04/13/2012	10/13	1/2024		-15		15		
Q South Select AB Deselect all (2) Excel Share To vestring	D	(2024		-15		[15	Search:	1
04333012 Cl.Sauth Solet AB Desided all [2] Eard Show 10 v estries Project Name	Characteristic Name	Station Code	Relative Depth	Activity Start Date	Sample-Routine	25 Quality Centrol Sample	Search: Duplicate	Result
0433-0012 Cq. Sental Select A3 Develoct all (2) Encol Show 10 v entries Project Name Tatal Profiles 2013-2023	Characteristic Name Dissolved asyges (DO)	Station Code	Relative Depth From Surface	-15 Activity Start Date 10/30/2019	Sample Routine 9.74	Quality Control Sample 1 11.39	Search	: Result 4 15 62
0433-2012 Cq. Samola Show 10 v carries Project Name Tailal Profiles 2013-2023 Tailal Profiles 2013-2023	Characteristic Name Dissolved asyges (DO) Dissolved asyges (DO)	Station Code	Edative Dapts	43 Activity Start Date 1030:2019 1030:2019	 Sample-Restlar 9.74 9.74 	13 Quality Control Sample 1 11.39 11.39	Search	: Result 4 1562 1962
0413-002 Church Show 10 w carries Project Nase Taida Prefiles 2013-2023 Taida Prefiles 2013-2023 Taida Prefiles 2013-2023	Characteristic Name Disolved anygen (DO) Disolved anygen (DO) Disolved anygen (DO)	Station Code	Relative Dupth	43 Activity Start Date 10302019 10392019 10392019	Sample-Reutine 9.74 9.74 9.74 10.45	13 Quality Control Sample 1 11.39 11.39 11.39	Search	2 Result 4 1562 1562 1563 - 561
0413-2012 C Instak Show I 0 w entries Project Nans Tidal Prefiles 2013-2023 Tidal Prefiles 2013-2023 Tidal Prefiles 2013-2023 Tidal Prefiles 2013-2023	Disolved aryges (DO) Disolved aryges (DO) Disolved aryges (DO)	Station Code 0 WWW-PATME-01 0 WWW-PATME-01 0 WWW-PATME-01 0	Relative Dupth	43 Activity Start Date 10/30/2019 10/30/201 10/30/20 10/30/20	Sample Reutine 9.74 9.74 10.45 10.45	13 Quality Control Sample 1 11.39 11.39 11.39 11.39	Search	2 Result 4 1562 1562 1564 - 8.61 - 8.61
0413-002 C Instak Show IO ♥ entries Project Name Triska Prefisis 2013-2023 Triska Prefisis 2013-2023 Triska Prefisis 2013-2023 Triska Prefisis 2013-2023 Triska Prefisis 2013-2023	Characteritatic Name Disorberd axyges (DO) Disorberd axyges (DO) Disorberd axyges (DO) Disorberd axyges (DO) Disorberd axyges (DO)	Station Code Station Code WWW.PATMH-01 WWW.PATMH-01 WWW.PATMH-01 WWW.PATMH-01 WWW.PATMH-01 WWW.PATMH-01 WWW.PATMH-01	Edative Daph Stron Surface From Surface From Surface From Surface From Surface	.43 Activity Start Date 10:90:2019 10:90:2019 10:90:2019 10:90:2019 10:90:2019 10:90:2019	Sample-Xentine 9.74 9.74 10.45 10.45 10.67 10.67	13 Quality Control Sample 1 11.39 11.39 11.39 11.39 11.39 11.39	Search	Result # 13.62 13.62 13.63 - 4.61 - -4.61 -

Figure 65 Duplicate Check Report

MDL Check Report

If the laboratory provides the Minimum Detection Limit (MDL) value for each parameter along with the results, you can run this report to check if any result values meet the \pm criteria for comparison. Results that fall above or below the criteria will be highlighted.

← → C (2) wqdas.com/reports/ReportMDLcheck	k		् 🖈 🖸 N
Monitoring Project Graph	Maps and Calender Report Quality Assurance Data Entry M	anage Investory Manage Instrument MetaData Administration Index Calculation Threshold Permit Pro-	oject 😥
Comparison report between actual con specified percentage (+/-)	Activity Report ncentration an Project Report Holding Tune Report Duplicite (No. 14 Project Report MDL Check Report	IDL) values, highlighting any results that fall outside the acceptal	ble range of the
Freques - Fash Tussee Project	Characteristics Calcium oxide	Location Depth `` XDRAGON WOATS XWWW-PATMH-22	~
Start Date 04/13/2024	End Date	Minimum Percentage Maximum Percentage]
Q.Sank Saler All Danket al (f) Facel Show 10 - estrice			Search:
Project Name 🔶 Characteristic Name 🔶 Location Name	Relative Depth Activity Type Name Activity Star	t Date 🕴 Method Code Name 🔶 MDL Value 🔶 Result Measure Value 🍦 Measure Value	Unit 🕴 Difference Result

Figure 66 MDL Checks Report

Logger Moving Average Report

In this report, users can generate hourly averages, as well as 8- and 12-hour running averages, for a specific parameter at a designated location.

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Weit Darby Darby Monitoring	g Project Graph Maps and C	alender Report Quality Assurance	Data Entry Manage Inventory	Manage Instrument	t MetaData Administration	Index Calculation Three	eshold Permit Project	
Report showing a	ctual data from a l	Activity Report Project Report Holding Time Report	ır and 24-hour mov	ing averages	5.			÷
Project *		Characteri Duplicate Check Report	Location	*		Result Status *		
Continuous Logger Project	· · · · · · · · · · · · · · · · · · ·	Temperature Report Logger Moving Avg	~ WWW-	PATMH-DW	~	Preliminary		~
Start Date	1	End Date						
04/13/2024		10/13/2024	C Q Sear	ch				
Select All Deselect all Excel							Search:	
Show 10 🗸 entries								
Project	Location	Characteristics 0	Date Time Sampling	Status	Result Measure Value	Moving Avg 8 Hr) Moving Avg 24 Hr	+
Project Continuous Logger Project	Location WWW-PATMH-DW	Characteristics 0	Date Time Sampling	Status Preliminary	Result Measure Value	Moving Avg 8 Hr	Moving Avg 24 Hr 15.49	•
Project Continuous Logger Project Continuous Logger Project	Location WWW-PATMH-DW WWW-PATMH-DW	Characteristics Image: Characteristics Temperature, water, deg C Temperature, water, deg C	Date Time Sampling 2024-07-27 13:00:00 PM 2024-07-27 14:00:00 PM	Status Preliminary Preliminary	Result Measure Value 15.1875 15.4775	Moving Avg 8 Hr 15.77 15.85	Moving Avg 24 Hr 15.49 15.55	÷
Project Continuous Logger Project Continuous Logger Project Continuous Logger Project	Location WWW-PATMH-DW WWW-PATMH-DW WWW-PATMH-DW	Characteristics	Date Time Sampling 2024-07-27 13:00:00 PM 2024-07-27 14:00:00 PM 2024-07-27 15:00:00 PM	Status Preliminary Preliminary Preliminary	Result Measure Value 15.1875 15.4775 15.54	Moving Avg 8 Hr 15.77 15.85 15.87	Moving Avg 24 Hr 15.49 15.55 15.64	•
Project Continuous Logger Project Continuous Logger Project Continuous Logger Project	Location WWW-PATMH-DW WWW-PATMH-DW WWW-PATMH-DW WWW-PATMH-DW WWW-PATMH-DW	Characteristics Temperature, water, deg C Temperature, water, deg C Temperature, water, deg C Temperature, water, deg C	Date Time Sampling 2024-07-27 13:00:00 PM 2024-07-27 14:00:00 PM 2024-07-27 15:00:00 PM 2024-07-27 15:00:00 PM 2024-08-24 13:00:00 PM	Status Preliminary Preliminary Preliminary Preliminary Preliminary	Result Measure Value 15.1875 15.4775 15.54 15.685	Moving Avg 8 Hr 15.77 15.85 15.87 15.88	Moving Avg 24 Hr 15.49 15.55 15.64 15.77	•
Project Continuous Logger Project Continuous Logger Project Continuous Logger Project Continuous Logger Project Continuous Logger Project	Location WWW-PATMH-DW WWW-PATMH-DW WWW-PATMH-DW WWW-PATMH-DW WWW-PATMH-DW WWW-PATMH-DW	Characteristics Temperature, water, deg C Temperature, water, deg C Temperature, water, deg C Temperature, water, deg C Temperature, water, deg C	Date Time Sampling 2024-07-27 13:00:00 PM 2024-07-27 14:00:00 PM 2024-07-27 15:00:00 PM 2024-08-24 13:00:00 PM 2024-08-24 13:00:00 PM	Status Preliminary Preliminary Preliminary Preliminary Preliminary Preliminary	Result Measure Value 15.1875 15.4775 15.54 15.685 16.085	Moving Avg 8 Hr 15.77 15.85 15.87 15.88 15.88 15.88	Moving Avg 24 Hr 15.49 15.55 15.64 15.77 15.93	
Project Continuous Logger Project Continuous Logger Project Continuous Logger Project Continuous Logger Project Continuous Logger Project	Location WWW-PATAGH-DW WWW-PATAGH-DW WWW-PATAGH-DW WWW-PATAGH-DW WWW-PATAGH-DW WWW-PATAGH-DW WWW-PATAGH-DW WWW-PATAGH-DW	Characteritides Temperature, water, deg C Temperature, water, deg C	Date Time Sampling 2024-07-27 13:00:00 PM 2024-07-27 14:00:00 PM 2024-07-27 15:00:00 PM 2024-08-24 13:00:00 PM 2024-08-24 14:00:00 PM 2024-08-24 14:00:00 PM	Status Preliminary Preliminary Preliminary Preliminary Preliminary Preliminary Preliminary Preliminary	Result Measure Value 15.1875 15.4775 15.54 15.685 16.685 16.17	Moving Avg 8 Hz 15.77 15.85 15.87 15.88 15.85 15.85 15.76	Moving Avg 24 Hr 15.49 15.55 15.64 15.77 15.93 16.10	•
Project Continuous Logger Project Continuous Logger Project Continuous Logger Project Continuous Logger Project Continuous Logger Project Continuous Logger Project	Location WWW-PATAGE-DW WWW-PATAGE-DW WWW-PATAGE-DW WWW-PATAGE-DW WWW-PATAGE-DW WWW-PATAGE-DW WWW-PATAGE-DW WWW-PATAGE-DW WWW-PATAGE-DW	Characteritides Temperature, water, deg C Temperature, water, deg C	Date Time Sampling 2024-07-27 13:00:00 PM 2024-07-27 14:00:00 PM 2024-07-27 14:00:00 PM 2024-08-24 13:00:00 PM 2024-08-24 14:00:00 PM 2024-08-24 14:00:00 PM 2024-08-24 14:00:00 PM	Status Preliminary Preliminary Preliminary Preliminary Preliminary Preliminary Preliminary Preliminary Preliminary	Result Measure Value 15.1875 15.54 15.685 16.685 16.17 16.03	Moving Avg 8 Hz 15.77 15.85 15.87 15.88 15.85 15.85 15.76 15.22	Moving Avg 24 Hr 15.49 15.55 15.64 15.77 15.93 16.10 16.27	•
Project Continuous Logger Project	Location WWW-PATAM-DW WWW-PATAM-DW WWW-PATAM-DW WWW-PATAM-DW WWW-PATAM-DW WWW-PATAM-DW WWW-PATAM-DW WWW-PATAM-DW WWW-PATAM-DW WWW-PATAM-DW	Characteritides Temperature, water, deg C Temperature, water, deg C	Date Time Sampling 2024-07-27 13:00:00 PM 2024-07-27 14:00:00 PM 2024-07-27 15:00:00 PM 2024-07-27 15:00:00 PM 2024-08-24 13:00:00 PM 2024-08-24 14:00:00 PM 2024-08-24 15:00:00 PM 2024-08-24 16:00:00 PM 2024-08-24 16:00:00 PM	Status Preliminary	Result Measure Value 15.1875 15.4775 15.54 15.685 16.085 16.17 16.03 15.97	Moving Avg 8 Hr 15.77 15.85 15.87 15.88 15.85 15.85 15.76 15.22 15.16	Moving Avg 24 Hr 15.49 15.55 15.64 15.77 15.93 16.10 16.27 16.45	
Project Continuous Logger Project		Characteritifics Temperature, water, deg C Temperature, water, deg C	Date Time Sampling 2024-07-27 13:00:00 PM 2024-07-27 14:00:00 PM 2024-07-27 15:00:00 PM 2024-08-27 15:00:00 PM 2024-08-24 14:00:00 PM 2024-08-24 14:00:00 PM 2024-08-24 15:00:00 PM 2024-08-24 16:00:00 PM 2024-08-24 16:00:00 PM 2024-08-24 16:00:00 PM 2024-08-24 16:00:00 PM	Status Preliminary Preliminary	Result Measure Value 15.1875 15.547 15.685 16.085 16.17 16.63 15.97 15.59 15.59 15.59 15.59 15.59 15.52	Moving Avg 8 Hr 15.77 15.85 15.87 15.85 15.85 15.85 15.22 15.16 15.15	Moving Avg 24 Hr 15.49 15.55 15.64 15.77 15.93 16.10 16.27 16.45 16.62	

Figure 67 Logger Averages

Index Auto Calculation

WQDas does auto calculations after entering the data for census for macroinvertebrates or fish. All the metadata for auto calculation is already fed into the threshold table.

BIBI Scores

WQDas automatically performs calculations after field staff enter data for the macroinvertebrate census. It is the responsibility of the field staff to accurately identify the bugs and mention about include or exclude them from the calculations.

→ C	wqdas.com/Censu	us/indexBIBI												९ ☆ ⊅	N
	Monitoring Proj	ect Graph M	Maps and Calender Rej	port Quality	Assurance Da	ta Entry M	lanage Inve	ntory Manage Is	strument	MetaData Administration	a Inde	x Calculation Thresh	hold Pe	ermit Project	
BIBI Score	Summary										BI	BI Scores BI Scores			
Project Select Project Select All Deselect a	ill 👔 Excel		Location Region Select Location	Region			Fr v	om Date a'dd/yyyy		To Date			upply Filter Sea	Clear rch:	
Show 10 v entries Project Name	Location Name	Location Region	Activity Start Date (BIBI Score	Total Indiviual	No. of Taxa	Metric	No. of EPT Taxa	Metric	No. of Ephemeroptera Taxa	Metric	No. of Scrapers Taxa	Metric	% Intolerant Urban	Metric
BI-BI Score Project	WWW-GWN-57	Piedmont	13-03-2024	1.40	76	6	1	1	1	0	1			2.63%	1
BI-BI Score Project	WWW-GWN-49	Piedmont	17-03-2024	1.60	100	8	1	3	1	1	1		-	23.00%	1
BI-BI Score Project	WWW-PATMH-SC	Highland	20-03-2024	3.00	67	4	5	1	1					-	-

Figure 68 BIBI scores

FIBI Scores

WQDas automatically performs calculations after field staff enter data for the fish census. It is the responsibility of the field staff to accurately identify the fish and provide any additional information on the data entry sheets.

If it needs to include or exclude from the calculations

→ C .	wqdas.com/Cens	us/indexFIBI											९ ☆ ⊅	N
V@DAS Aty Data Acquisition Solution	Monitoring Pro	ject Graph 1	Maps and Calender Ro	sport Quality	Assurance	Data Entry M	anage Inventory Ma	nage Instrume	nt MetaData Ad	lministratio	n Index Calculation	Thresh	old Permit Project	
FIBI Score	Summary										BIBI Scores FIBI Scores			
Project			Location Regio	n			From Date		To D	ate				
Select Project			✓ Select Location	Region			✓ mm/dd/yyyy		🗖 mm/d	Ыуууу		🗖 Aş	oply Filter Clear	
Select all Deselect	all 🕅 Excel												Search:	
Project Name 🗍	Location Name	Location Region	Activity Start Date	Slope Graph	FIBI Score	Total Indiviual	No. of Benthic Spec	ies Metric	No. of Tolerance Fish	Metric	No. of Trophic Status	Metric	No. of Round Body Suckers	Metric
FIBI Score project	WWW-GWN-46	Piedmont	25-02-2024	۲	3.00	33	0	1	21	5	33	5	•	•
FIBI Score project	WWW-PATMH-DW	Highland	05-03-2024	۲	2.20	20	0	5	0	1	9	1		-
FIBI Score project	WWW-GWN-49	Piedmont	12-03-2024	۲	2.00	43	4	1	0	1	10	5	-	-
4														

Figure 69 FIBI scores

Stream width graph for slope and intercept .

IBI Score	Summary				_	Data Points	Regression Line						
roject ielect Project			Location R	8					yy			phy Filter Clear	
Select all Deselect :	all 👔 Excel			7								Search:	
roject Name 🙏	Location Name	Location Region	Activity Start Da	6					detric	No. of Trophic Status	Metric	No. of Round Body Sucker	rs Me
IBI Score project		Piedmont	25-02-2024									•	
IBI Score project	WWW-PATMH-DW	Highland	05-03-2024	E						9	1		•
IBI Score project	WWW-GWN-49	Piedmont	12-03-2024	Widt									
owing 1 to 3 of 3 er	tries1 row selected		-	4								Previous	1

Figure 70 Slope graph for stream width for FIBI calculations

Threshold Criteria for BIBI or FIBI Scores

Project managers need to set the threshold criteria for BIBI and FIBI scores only once. After this initial setup, WQDas will automatically populate all FIBI and BIBI indices whenever field staff enter census data, based on the established criteria.

CDAS Data Acquisition Solution	Monitoring Project	Graph Maps and Calender Report	Quality Assurance Data I	Entry Manage Inventory Manage In	nstrument MetaData Administration	Index Calculation Threshold Permit Pro	ject
axon Thr	eshold Setup						
ample Study		Location Region					
Select Sample Stud	by .	✓ Select Location Re	gion	✓ Apply Filter Clear			
Select all Deselect	t all 👔 Excel					Search:	
ow 10 ∨ entr	ies						
Sample Study	Location Region	• Name	Less Then Threshold	Less Then Threshold Value	More Then Equal Threshold	More Then Equal Threshold Value	Action
BIBI Scores	Piedmont	Number of taxa	15	1	24	5	
SIBI Scores	Piedmont	Number of EPT taxa	15	1	14	5	20
BIBI Scores BIBI Scores	Piedmont Piedmont	Number of EPT taxa Number of Ephemeroptera taxa	15 3	1	14	5	20
BIBI Scores BIBI Scores BIBI Scores	Piedmont Piedmont Piedmont	Number of EPT taxa Number of Ephemeroptera taxa % Intolerant Urban Individuals	15 3 38	1 1 1	14 5 80	5 5 5	
BIBI Scores BIBI Scores BIBI Scores BIBI Scores	Piedmont Piedmont Piedmont Piedmont	Number of EPT taxa Number of Ephemeroptera taxa % Intolerant Urban Individuals % Tanytarsini Individuals	15 3 38 0.1	1 1 1 1	14 5 80 4	5 5 5 5	
BIBI Scores BIBI Scores BIBI Scores BIBI Scores BIBI Scores	Piedmont Piedmont Piedmont Piedmont Piedmont	Number of EPT taxa Number of Ephemeroptera taxa % Intolerant Urban Individuals % Tanytarsini Individuals % Scrapters Individuals	15 3 38 0.1 3	1 1 1 1 1	14 5 80 4 13	5 5 5 5 5	
SIBI Scores SIBI Scores SIBI Scores SIBI Scores SIBI Scores SIBI Scores	Piedmont Piedmont Piedmont Piedmont Piedmont Piedmont	Number of EPT taxa Number of Ephemeroptera taxa % Intolerant Urban Individuals % Tanytarsimi Individuals % Scrapers Individuals % Svimmers Individuals	15 3 38 0.1 3 3	1 1 1 1 1 1 1 1	14 5 80 4 13 18	5 5 5 5 5 5 5 5 5	
IBI Scores IBI Scores IBI Scores IBI Scores IBI Scores IBI Scores IBI Scores	Piedmont Piedmont Piedmont Piedmont Piedmont Piedmont Piedmont Piedmont Piedmont Piedmont	Number of EPT taxa Number of Ephemeroptera taxa % Intolerant Urban Individuals % Tarytarsini Individuals % Scrapers Individuals % Swimmers Individuals % Symmers Individuals % Symmers Individuals	15 3 38 0.1 3 3 26	1 1 1 1 1 1 5	14 5 80 4 13 18 50	5 5 5 5 5 5 5 1	
BIBI Scores BIBI Scores BIBI Scores BIBI Scores BIBI Scores BIBI Scores BIBI Scores BIBI Scores BIBI Scores	Piedmont Piedmont Piedmont Piedmont Piedmont Piedmont Piedmont Piedmont Costal Plaim	Number of EPT taxa Number of Ephemeroptera taxa % Intolerant Urban Individuals % Tarytarsini Individuals % Scrapers Individuals % Swimmers Individuals % Diptera Individuals % Diptera Individuals Number of taxa	15 3 38 0.1 3 3 26 14	1 1 1 1 1 1 5 1	14 5 60 4 13 18 50 22	5 5 5 5 5 5 5 1 5	

Figure 71 Threshold Criteria for BIBI or FIBI Scores

Instrument Inventory Management

This module enables users to manage all instruments used within the organization. It tracks each instrument's certification status and identifies the individual responsible for its custody.

Adding a New Instrument to Inventory Management System

In this module, each instrument is tracked along with its sensors and certification status. To add a new instrument, users must provide the manufacturer name, model number, and serial number. Additionally, users need to indicate whether the instrument is multi-sensor or single-sensor and confirm its active status in the inventory.

→ G 52 mdc	das.com/Inventory/Index								Q \$	ि <u>ति</u> । 🕢
/@Das Ry Deas Acquisition Solution	Monitoring Project Graph Ma	faps and Calender	Report Quality Assurance	Data Entry Manage	e Inventory Manage Instru	ment MetaData Administratio	on Index Calculation	Threshold	Permit Project	
Create Invento	ory Setup			Create Assign Assign	a Sensor to Inventory n Inventory to Members					-
Ins Serial Number*		Ins Barcod	le*	Assign	n Inventory History		Ins Model*			
Serial Number		Barcode			Select Manufacture		•			~
Ins Type*		Valid Certi	ificate Date*		Model Multi Sensor *		Actived *			
Select Type		✓ mm/dd/yyyy	1		Select MultiSensor		✓ Select Active			~
										Save
Show 10 v entries								Si	iearch:	Save Clear
Show 10 v entries Manufacturer	A Model	•	Ins Serial Number	Ins Barcode	Ins Type	6 Certificate Valid	Multi Sensor	Si Act	iearch:	Save Clear
Show 10 v entries Manufacturer Eureka h	Model Eureka Continuous Logger	¢	Ins Serial Number 734543	Ins Barcode 8565465	Ins Type Logger	Certificate Valid 2020-01-01	Multi Sensor	Si Act	iearch:	Save Clear
Show 10 v entries Manufacturer Eureka h In-Situ	Model Eureka Continuous Logger MS5	¢ r	Ins Serial Number 734543 5345436	 Ins Barcode 8565465 1702556 	Ins Type Logger Sonde	Certificate Valid 2020-01-01 2024-09-14	Multi Sensor	Si Act	iearch: A	Save Clear
Show 10 v entries Manufacturer Eureka h In-Situ In-Situ	Model Eureka Continuous Logger MSS MS5	r	Ins Serial Number 734543 5345436 334549	Ins Barcode 8565465 1702556 566444	Ins Type Logger Sonde Sonde	Certificate Valid 2020-01-01 2024-09-14 2024-09-14	Multi Sensor	Si Act	iearch: A	Sare Clear
Show 10 v entries Manufacturer Eureka h In-Situ In-Situ	Model Eureka Continuous Logger MS5 MS5 DS5	r	Las Serial Number 734543 5345436 334549 8789785	Ins Barcode 8565465 1702556 566444 1096895582	Ins Type Logger Sonde Sonde Sonde	Certificate Valid 2020-01-01 2024-09-14 2024-09-14 2024-09-14	Multi Sensor To Co To Co To Co To Co	Si Act Tr Tr Tr Tr Tr Tr Tr	tive A D C D C D C D C C	Ketion
Show 10 v entries Manufacturer Eureka h In-Situ In-Situ In-Situ Jenco	Model Eureka Continuous Logger MSS MSS DS5 Omega's DO	r	Ias Serial Number 734543 534543 334549 5789785 1231243	Ins Barcole 8565465 1702556 566444 1096595582 3243242	Ias Type Logger Sonde Sonde Sonde Disk	Certificate Valid 2020-01-01 2024-09-14 2024-09-14 2024-09-14 2024-09-14 2024-09-14	Multi Sensor C		iearch: five A D C D C D C D C D C D C D C C D C C D C C D C C C D C C C C	Ketion
Show 10 v entries Manufacturer Eureka h In-Situ In-Situ In-Situ Jenco Jenco	Model Eureka Continuous Logger MS5 MS5 DS5 Omega's DO Omega's DO	r	Ins Serial Number 734543 5345436 334549 8789785 1231243 7231243	Ins Barcole 8565465 1702556 566444 1096585582 3243242 67657	Ins Type Logger Logger Sonde Sonde Disk Disk	Certificate Valid 2020-01-01 2024-09-14 2024-09-14 2024-09-14 2024-09-14 2024-09-14 2024-09-14 2024-09-14	Multi Sensor Contact	Sa Carlor	iearch:	ketion
Show 10 v entries Manufacturer Eureka h In-Situ In-Situ In-Situ Jenco Jenco Jenco	Model Eureka Continuous Logger MS5 MS5 DS5 Omega's DO Omega's DO Omega's DO		Ins Serial Number 734543 5345436 334549 8789785 1231243 7231243 734542	Ins Barcole 8565465 1702556 566444 1096855582 3243242 67657 8565462	Ins Type Logger Logger Sonde Sonde Disk Disk Disk	Certificate Valid 2020-01-01 2024-09-14 2024-09-14 2024-09-14 2024-09-14 2024-09-14 2024-09-14 2024-09-14 2024-09-14 2024-09-14 2024-09-14 2024-09-14 2024-09-10 2024-01-01 2024-01-01	Multi Sensor C		tive A	ketlon () 2 0 2 0 2 0 2 0 2 0 2 0 2 0 2 0 2 0 2 0

Figure 72 How to add new inventory for tracking

If the instrument is multi-sensor, the user can click on the "eye" icon to view the details in a popup.

$\leftarrow \rightarrow$	C 😁 wqdas.com	/Inventory/Index										Q 1	r 13	
National Activity Classes Activ	DAS Monitori	ng Project Graph Maps an	ıd Calender	Report Quality Assurance	Data En	try Manage Inventory	Manage Instru	ument MetaData Admi	nistration	Index Calculation	Threshold	Permit Projec	t	
Cre	eate Inventory S	etup		Sensors Assoc	iate W	ith This Instru	ıment							
Ins S	Serial Number*		Ins Barcod		_					Ins Model*				
Serial	al Number		Barcode	Part Number	Unit Name	Charateristic Name	Analytical Method	Analytical Method Context	~					~
Ins 1	Type*		Valid Certi	1096895582-4545767-	None	pН	3500-CA(B)	APHA		Actived *				
Sele	ect Type	~	mm/dd/yyyyy	Sonde					~	Select Active				~
				1096895582- 765778- Sonde	mg/l	Dissolved oxygen (DO)	2530-C	APHA					Save	Clea
Show	10 v entries			1096895582- 9787855- Sonde	deg C	Temperature, water	3135.2I	USFDA			s	earch:		
Mar	nufacturer 🔶	Model	+	1096895582- 6758534-	mmHg	Barometric pressure	2340C	APHA	-	Multi Sensor) Ac	tive 0	Action	÷
Eure	eka h	Eureka Continuous Logger		Sonde						Ya 🖉		>		
In-S	Situ	M\$5		1096895582- 6599022- Sonde	uS/cm	Specific conductance	2510B	APHA		Y 10		>		
In-S	Situ	MS5		1096895582- 3456860-	ppm	Optical brighteners	1668A	USFDA		SE 🕗	-	•		
In-S	Situ	DS5		Sonde						Ve 🔍	2	2		
Jenc	co	Omega's DO		1096895582- 646456- Sonde	NTU	Turbidity	3030D	APHA		80	Ye	2		
Jenc	co	Omega's DO								80		•		
Jenc	co	Omega's DO						Close		No	<u>-</u>	2 C		
YSI,	I, a Xylem brand	DS5			_	_				Yes 📀	Ye	C		

Figure 73 Instruments Sensor's details

Inventory Assigned to a Team Members

On this screen, the project manager can assign instruments to team members. If the project manager later needs to unassign an instrument and reassign it to someone else, this can also be done on the same screen.

→ C 😋 wqdas.com/InventoryA	ssign/Index									@ ☆	D N
VCDAS Monitoring Project	Graph Maps a	nd Calender Repo	t Quality Assurance	Data Entry M	danage Inventory	Manage Instrument	MetaData Adm	inistration Index Calculation	Threshold	Permit Project	
Assigned Inventory Setup]		User To Assign*		Create Inventory Assign Sensor to Inv Assign Inventory to Assign Inventory H	ventory Members istory	Active	•			
100 110270 00000				1							Save
Instrument		User									
Select Instrument	~	Select User			✓ Apply Filter	Clear					
ihow 10 🗸 entries									8	Search:	
Instrument Name	Instrument :	Type 🕴	Certification Valid	Active		iensor 🔶 .	Assigned To	Role	4 Assign D	ate 🔶	Action
In-Situ DS5 1096895582	Sonde		2024-09-14	50	<u>80</u>	:	Najma Khokhar	Super Admin	2024-09-1	19	UnAssign
In-Situ MS5 566444	Sonde		2024-09-14	60	•••		Smith John	Field Technician	2024-09-1	14	UnAssign
Jenco Omega's DO 3243242	Disk		2024-01-01	•	80	:	Najma Khokhar	Super Admin	2024-08-2	26	UnAssign
Jenco Omega's DO 67657	Disk		2024-01-01	S	80		Smith John	Field Technician	2024-09-1	14	UnAssign
YSI, a Xylem brand DS5 454545	Sonde		2024-01-01	•	•••	:	Nathan Andy	Organization Admin	2024-09-1	14	UnAssign
YSI, a Xylem brand DS5 7876888	Sonde		2024-01-01	50	80	1	Ewa Harris	Field Technician	2024-09-1	19	UnAssign

Figure 74 How to assign each instrument to individual users or team members

History for Instruments Assignments

← → C °= wqdas.com/	InventoryAssign/Invernte	oryHistory							0 ☆	រិ 📵 🗄
Monitoria Attr Caselly Data Acquesters Tohyton	ng Project Graph Map	os and Calender Report	Quality Assurance I	Data Entry Manage Inventory	Manage Instrument	MetaData Administration	Index Calculation	Threshold	Permit Project	6
				Create Inventory						
Inventories Assigned	d History Setup			Assign Sensor to In	iventory					
				Assign Inventory to	Members					
Instrument		User		Assign inventory P	ustory					
Select Instrument	~	- Select User		✓ Apply Filte	Clear					
Show 10 v entries	_		_					5	Search:	
Instrument	1	Assigned User	•	Role	•	Assign Date) 0	nAssign Date		•
In-Situ MS5 1702556		Sandra Tom		Quality Assurance		2024-06-24	20	024-09-14		
In-Situ MS5 1702556		Ewa Harris		Field Technician		2024-09-14	20	24-09-19		
Showing 1 to 2 of 2 entries									Previous	1 Next

Figure 75 Inventory tracking for user assignments

User Management

The organization's administrator will manage all user rights and privileges. This system is rolebased, with each user assigned a specific role. The primary roles include "Super Admin," "Organization Admin," "Project Manager," "Field Staff," "Auditor," "Quality Assurance Officer," and "Standard User." Each role has its own dashboard, tailored to their specific responsibilities and privileges.

User Managment S	etup						
Organization	Role	Role					
Select Organization	▼ Select Role	▼ Apply Filter	Clear				
Show 10 \Leftrightarrow entries					Search:		
Name ↑↓	Username/Email ↑↓	Organization 1	Active ↑↓	Role ↑↓	Phone Number ↑↓	Action 1	
Najmakhokhar@gmail.com	Najmakhokhar@gmail.com	Innovated Tech	Yes	Standard User	4107829923		
tech.zone.columbia@gmail.com	tech.zone.columbia@gmail.com	Innovated Tech	Yes	Quality Assurance	24343423433		

Figure 76 User management system for the organization

Role Based System

This is the list of roles recommended for an organization to have for each project.

Role Setup		±
Show 10 + entries		Search:
Name	↑↓ Active	↑↓ Action ↑↓
Standard User	Yes	
Auditor	Yes	
Super Admin	Yes	
Quality Assurance	Yes	
Project Lead	Yes	
Org Admin	Yes	
Field Technician	Yes	



Screen Permission for Different Roles

makhokhar@techzonemd.com * Sub Screen Actions Project :	Select User Role	PROJECTS, MetaData,	Data Entry Screen, M	anage Instruments,	, Inventory Co 🕶	Project, Project Sample Study, Project Section, Project Collection Equipment
Sub Screen Actions						
Project :						
		CanView 🗹	CanCreate 🗹	CanEdit 🗹	CanDelete 🗹	
Project Sample Study :		CanView 🗹	CanCreate 🗆	CanEdit 🗆	CanDelete 🗆	
Project Section :		CanView 🗹	CanCreate 🗌	CanEdit 🗌	CanDelete 🗌	
Project Collectio	n Equipment :	CanView 🗹	CanCreate 🗌	CanEdit 🗌	CanDelete 🗌	
Project Location	Schedule :	CanView 🗹	CanCreate 🗌	CanEdit 🗌	CanDelete 🗌	
Project Characte	eristic :	CanView 🗌	CanCreate 🗌	CanEdit 🗌	CanDelete 🗌	
Project Location	Group :	CanView 🗆	CanCreate 🗆	CanEdit 🗆	CanDelete 🗆	

Only the super admin has the authority to assign different permissions to various roles.

Figure 78 Each role has assigned privileges to access different pages in the WQDas

Teams

Project managers can create various teams and assign them to different sections of a project. They can also monitor each team's performance and track their responsibilities.

← → C 😋 wqdas.com/TeamMember/Index				९ 🛧 🖸 🛛 🛛
Monitoring Project Graph Maps	and Calender Report Quality Assurance Data Entry	Manage Inventory Manage Instrument	MetaData Administration Index Calculation	Threshold Permit Project
			Instruments Manufacturers	
Team Members Setup			Instrument Model	
			Watershed	
UserRole*	Team*	Active *	Master Location	
Select User 🗸	Select Team	✓ Select Active	Training	
			Team	
			Team Member	Save Clear
			Taxon Bug	
UserRole	Team		Taxon Fish	
Select User 🗸	Select Team	✓ Apply Filter Clear	Delivery	
			Characteristic Sync	
Select all Deselect all 🕜 Excel			LookUp	Search:
Show 10 v entries			WaterShed Mitigation	
User With Role		† Team	WaterShed SubDivided	¢ Action ¢
Jennifer Naylor, as a Auditor		Team A	8	
Sandra Tom, as a Quality Assurance		Team A	50	
Smith John, as a Field Technician		Team A	No.	

Figure 79 Each Team has different member assign to different project sections

Training Tracking for Members

The project manager can track the training status of all team members. If anyone requires retraining, they can request additional training.

	serTraining/Index									@ ☆	D 🛛
WODAS Monitoring 3	Project Graph Maps a	nd Calender Report	Quality Assurance Data Entry	y Manage Inventory	Manage Instrument	MetaData	Administration	Index Calculation	Threshold	Permit Project	
							User Managment	Setup			
User Training							User Training				Γ
User*			Training*			Е	Training Complete	Date *			
Select User		~	Select Trainner			~	mm/dd/yyyy				c
Certification Valid Date			Certification Valid								
mm/dd/yyyy		٥	Select Active			~					
											Save
User		Training		Trainir	g Start Date			Training End D	ate		
Select User	~	Select Training		✓ mm/dd/y	777		D	mm/dd/yyyy			c
Apply Falter Class Select all Deselect all (?) Excel Show 10 •• entries									s	earch:	
User	Training	•	TrainingCompleteDate	÷	CertificationValidDate		• c	Certification Valid		() Actio	n 🔶
Najma Khokhar 🔍	QA/QC Training Advance		2024-10-01		2026-10-31		•	Yes			1

Figure 80 Training tracking for employees

Project Time Tracking for Employees

The project manager can track the time of each employee spending on different activities for any project to get billable hours.

	Monitoring Project G	raph Maps and Calender Report	Quality Assurance Data Entr	y Manage Inventory	Manage Instrument	MetaData Adminis	tration Index Calculation	Threshold	Permit Project	Q
									Permit Project	
Permit Proje	ct Timeline								Permit Project Timeline Permit Project Report	₽⊵
Permit Project*		Permit Activity Date	*	Activity 7	Type *		Project Time Sp	oent		
Helethrope Ridge		✓ 10/15/2024		D Short Me	eetings (x0.5hr)		~ 1			
Project Approved										
No		~								
Comments										
										11
									Sav	Clear
Show 10 🛩 entries									Search:	
Permit Project	Activity UserName	Project Activity Date	Activity Type	Project TimeSpent	Project Appr	oved 🕴 Com	nents		Act	ion 🕴
Helethrope Ridge	SmithJohn	05/08/2024	Email (x0.5 hr)	2.5	80	Testir	g		2	
Helethrope Ridge	NathanAndy	08/14/2024	Base (1hr)	1	80	Secor	d set of review		2	
Shinning Solar Project	NathanAndy	09/10/2024	Complex Doc Review	3	80	Still v	nder review and requested add	itional document	ts.	

Figure 81 Project Time Tracking