Introductions

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Presentation Goals

✓ Access Field Maps and Survey123 applications

✓ Learn about verification tools and resources for site visits

✓ Prepare for Part 2: Training on Verification Process

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Training Audience

Required Attendees

- Entities serving as verifiers
- Anyone interested in performing verification services

Suggested Attendees

- CWSP Staff
- BWQC Members
- Maintainers who will be maintaining multiple sites
- Municipal staff

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Training Outline:

Tools Overview

Field Maps

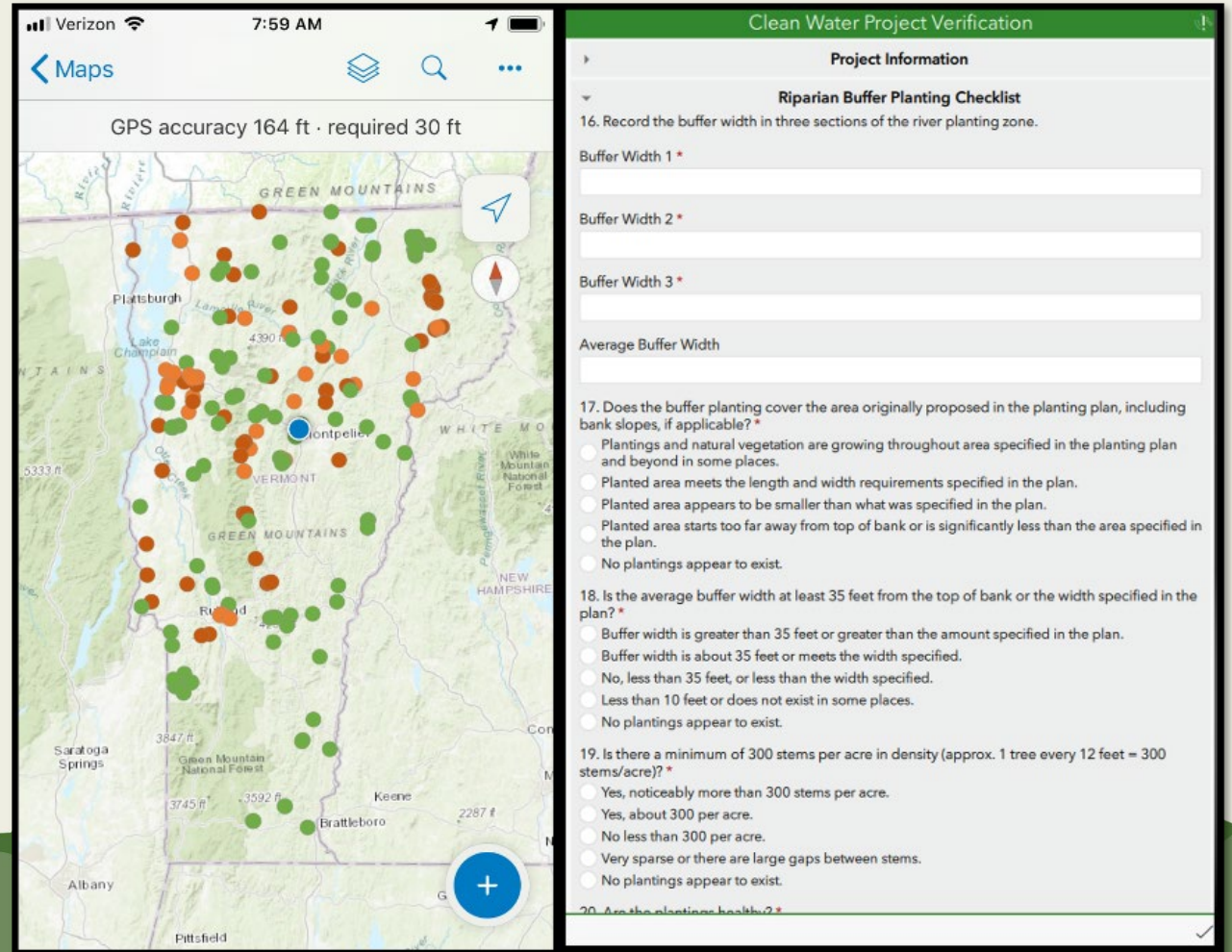Survey123

Access Survey123 group

Download Verification tools

Verification Resources

Next training: July 10

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Verification Tools Overview

ESRI Products
o Field Maps
o Survey123

Field Maps

- Uses Watershed Projects Data to provide project location and information
- Pop-up in Field Maps displays project information
- "Launch" the appropriate checklist
- Project information will autofill Survey123

Survey123 Checklists

- Checklist to collect data in the field

- Gather information and images

- Automatically calculates scores based on chosen answers

Buffer Width 1 *
40

Buffer Width 2 *
30

Buffer Width 3 *
35

Average Buffer Width
35

What is the extent of…

19. **Erosion** at the inlet or channel leading to inlet? *

4	3	2	1	0
None	Minor	Moderate	Major	Severe

Average Inlet Score
4

Inlet Grade: **Functional** (meets requirements)

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Stormwater Survey123 Checklist

Stormwater Verification

Outlet

O-1. Capture / Browse to Outlet Photo *

1 of 1

photooutlet-20240621-134227.JPG

O-2. Photo Description *

What is the extent of…

O-3. **Erosion** at the outlet? *

| None | Minor | Moderate | Major | Severe |

O-4. **Sediment accumulation** at the outlet/underdrain or outlet structure, or trash rack? *

| None | Minor | Moderate | Major | Severe |

O-5. **Trash** or natural **debris** at the outlet, outlet structure or trash rack? *

| None | Minor | Moderate | Major | Severe |

Additional Notes:

Average Outlet Score

3.7

Outlet Grade: **Functional** (meets requirements)

Project Information

*Select Practice Type **first** to get relevant questions and sections.*

1. Practice Type *

Gravel Wetland

○ Bioretention
○ Dry Detention Pond
● Gravel Wetland
○ Infiltration Trench/Basin

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Riparian Buffer Planting Survey123 Checklist

Riparian Buffer Verification

Project Information

Riparian Buffer Planting Checklist

17. Record the buffer width in three sections of the river planting zone.

Buffer Width 1 *

25

Buffer Width 2 *

30

Buffer Width 3 *

35

Average Buffer Width

30

18. Is the average buffer width at least 35 feet from edge of the bank to the edge of the buffer planting area, or the width specified in the plan? *
- ● Buffer width is greater than 35 feet or greater than the amount specified in the plan.
- ○ Buffer width is about 35 feet or meets the width specified.
- ○ No, less than 35 feet, or less than the width specified.
- ○ Less than 10 feet or does not exist in some places.
- ○ No plantings appear to exist.

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User Guides

User Guide Version Date: June 28, 2024

Riparian Buffer Projects Check[list]

Summary: This checklist should be used by qualified and trained verifiers [...] planting projects. See the Verification Program Standard Operating Proce[...] process and to access the applications. Verification visits occur througho[...] projects in late spring is the best timing for accessing and locating plant[...] details including planting map, planting plan with planting density, specie[...] verification visits. If possible, bring these documents to reference in the [...] of all the questions in the riparian buffer checklist and best practices [...]

Checklist scoring: Verifiers are encouraged to use their experience and [...] condition. Each response has a numerical score associated with the [...] this guide for reference, but not in the checklist itself. Based on the [...] indicate if that section of the project is Functional (4-2.5, meets requ[...] maintenance may be needed), Failed (<0.5-0, not functional, needs r[...] checklist automatically calculates an average overall score. See Tabl[...] information on scoring.

SURVEY QUESTIONS (* INDICATES REQUI[...])

Project Information

1. **Project ID*** Implementation Phase Watershed Projects Database ID (a[...]
2. **Project Name*** (auto populated)
3. **Project Type*** (auto populated)
4. **Town(s)*** (auto populated)
5. **BMP ID*** (auto populated)
6. **BMP System Name*** (auto populated)
7. **Project Completion Date*** (auto populated)
8. **Select Clean Water Service Provider (CWSP)***
9. **Verifier Name(s)**
10. **Verifier Organization***
11. **Verification Date and Time*** (auto populated)
12. **Date of Last Rain Event** (optional, select the appropriate date)
13. **Are you able to locate the project area?***

User Guide version date: June 27, 2024

Clean Water Project Verification Stormwater Survey123 Checklist

Summary: This checklist should be used by qualified and trained verifiers to assess implemented Stormwater projects. See the Verification Program Standard Operating Procedure (SOP) for details on the verification process and to access the applications. Prior to a visit, review as-built site plans, planting plans (as applicable), reports, and notes from prior verification visits. This user guide provides a breakdown of all the possible questions in the stormwater checklist and best practices on collecting data and images.

Checklist Sections, Questions, and Scoring: Verifiers are encouraged to use their best judgment when scoring the project's condition. The stormwater checklist is separated into five sections: Project Information, Pretreatment (if applicable), Inlet, Within the Practice, and Outlet (note: permeable pavement practice type has an additional section). You do not have to complete the checklist sections in any specific order. Questions ask the verifier to indicate the severity of the presence of visual indicators of project condition such as erosion, sediment accumulation, standing water, vegetation, and presence of trash/natural debris.

Question responses range from "None" (no presence) to "Severe" (high presence), and each response has a numerical score associated with the response. The scores are given in this guide, but not in the checklist. The table below provides the range for responses, their associated numerical value, and a description of what the response means in terms of presence of visual indicators.

Responses	None	Minor	Moderate	Major	Severe
Score	4	3	2	1	0
Description	No presence of the visual indicator.	Some presence of the visual indicator, but extent is not enough to require/flag maintenance needs.	Functional but may require some maintenance, the condition is on a downward trend.	Functional but requires maintenance, the condition is on a downward trend and approaching not functional.	Not functioning, the extent of the visual indicator is disrupting project function, maintenance and/or repair needed.

Based on the calculated score, a section "Grade" will indicate if that section of the project is Functional (4-2.5, meets requirements), Marginal (<2.5-.5, maintenance may be needed), Failed (<0.5-0, not functional, needs repairs, or does not exist). At the end, the checklist automatically calculates an average overall score. See Table 2 of the Verification SOP for additional information on scoring.

SURVEY QUESTIONS (* INDICATES REQUIRED FIELD)

Project Information

1. **Practice Type** Drop down, select the practice type to get relevant checklist sections.

   Practice Types: Bioretention, Dry Detention Pond, Gravel Wetland, Infiltration Trench/Basin, Permeable Pavement, Sand Filter, Vegetated Swale, and Wet Pond.

   Note: Gravel Wetland checklist numbering will jump from W-5 to W-8 in the "Within Practice" section, but for the rest of the practice types the numbering won't have gaps.

2. **Project ID*** Implementation Phase Watershed Projects Database ID (auto populates)

1

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Next: How to Access Tools

Any Questions so far?

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Survey123 Group Access

1) Use individual organization ArcOnline member account.

   - *If your organization does not have a log in, talk to CWSP or reach out to Rachel to use DEC Partner account .*

2) *Via web browser,* log into ArcOnline using ArcGIS member account.

3) Request to join the [Clean Water Project Verification Group.](#)

4) We will approve requests to join the group.

Clean Water Project Verification is the use of visual and measured indicators to assess clean water project function.

owned by cleanwatervt

Any organization

Join this group

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Download Applications on Device

- Download Survey123 and ArcGIS Field Maps application onto mobile device or tablet
  - Android users, download [ArcGIS Field Maps](#) and [Survey123](#) from the Google Play Store.
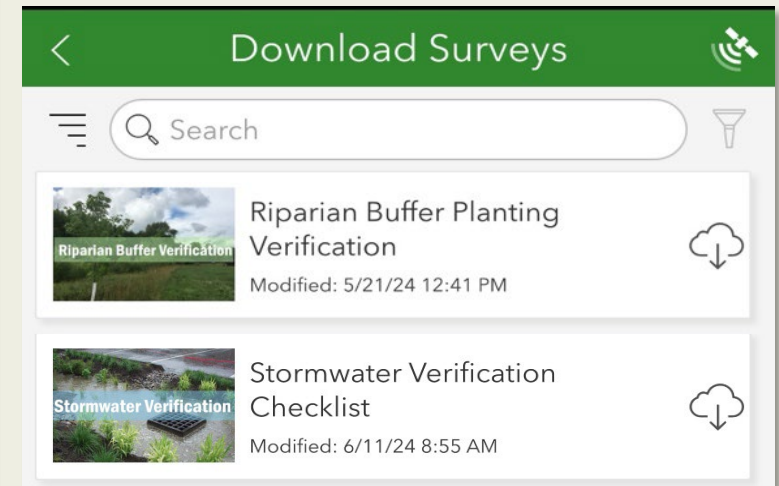 - Apple users, download [ArcGIS Field Maps](#) and [Survey123](#) from Apple Store.
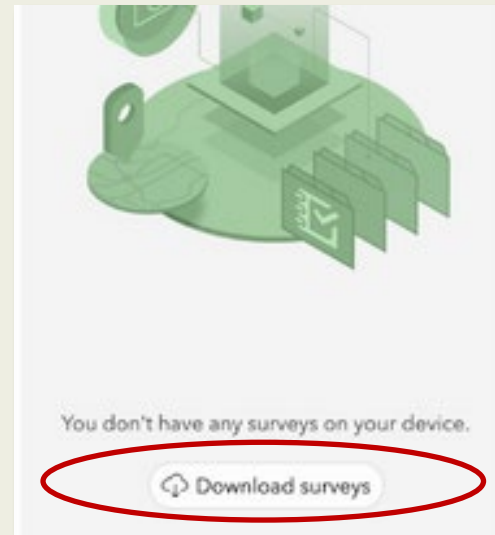

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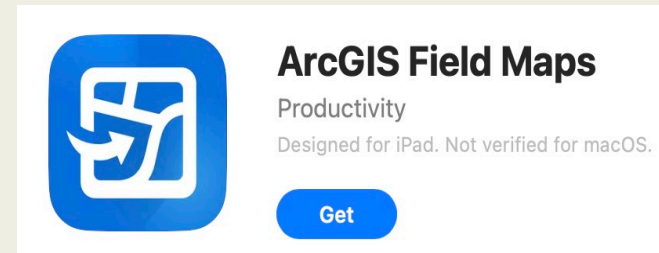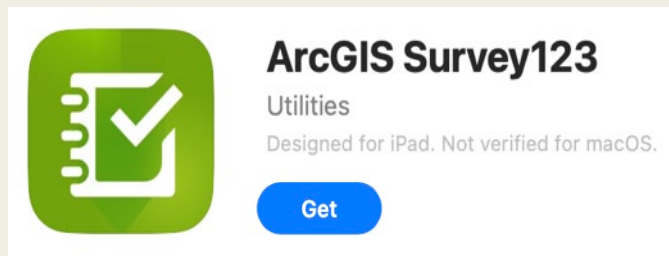
Survey123: Sign in and Download

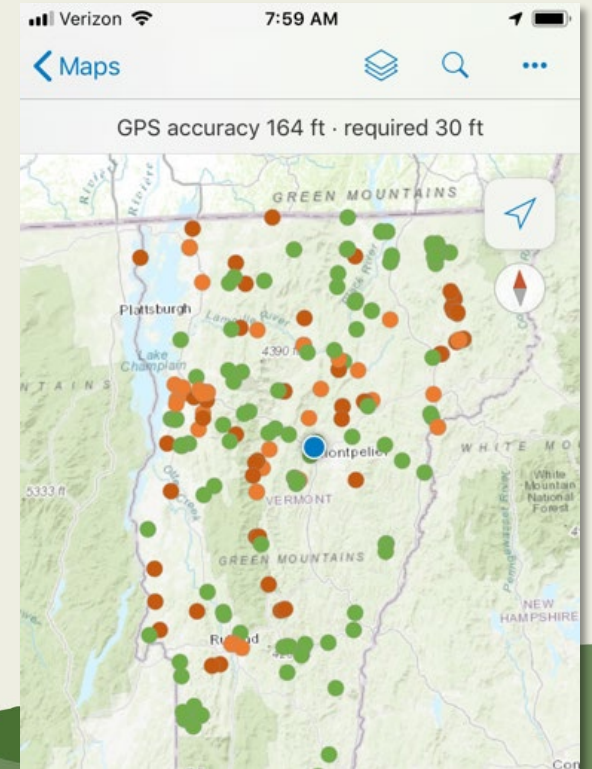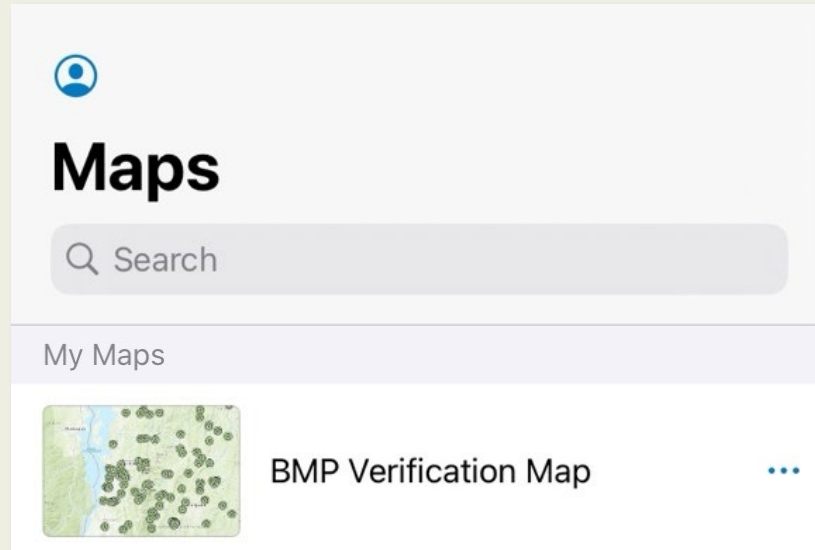## Sign into Survey123
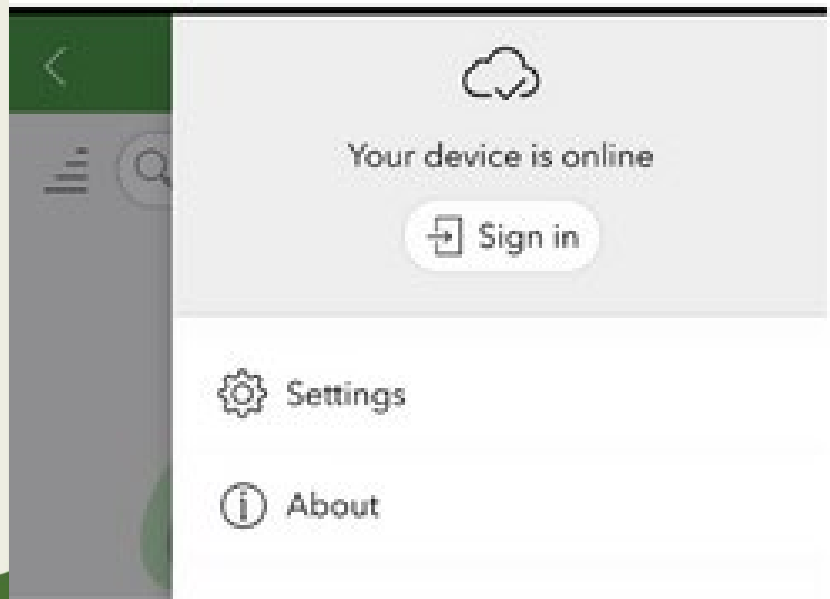
Download Checklists

Field Maps: BMP Verification Map
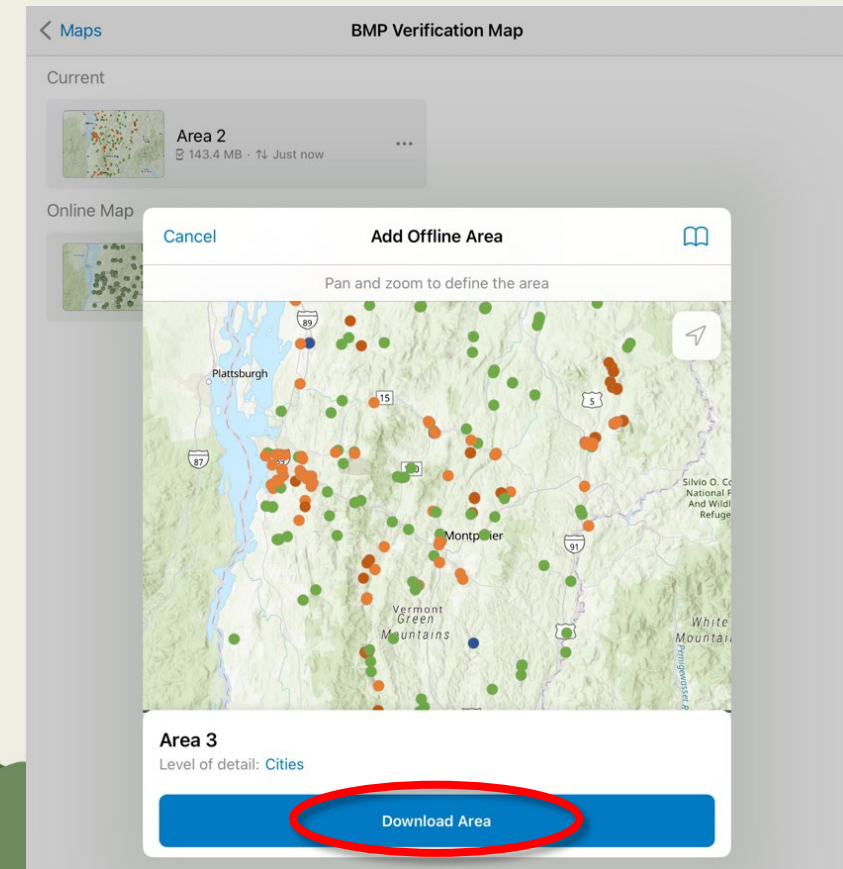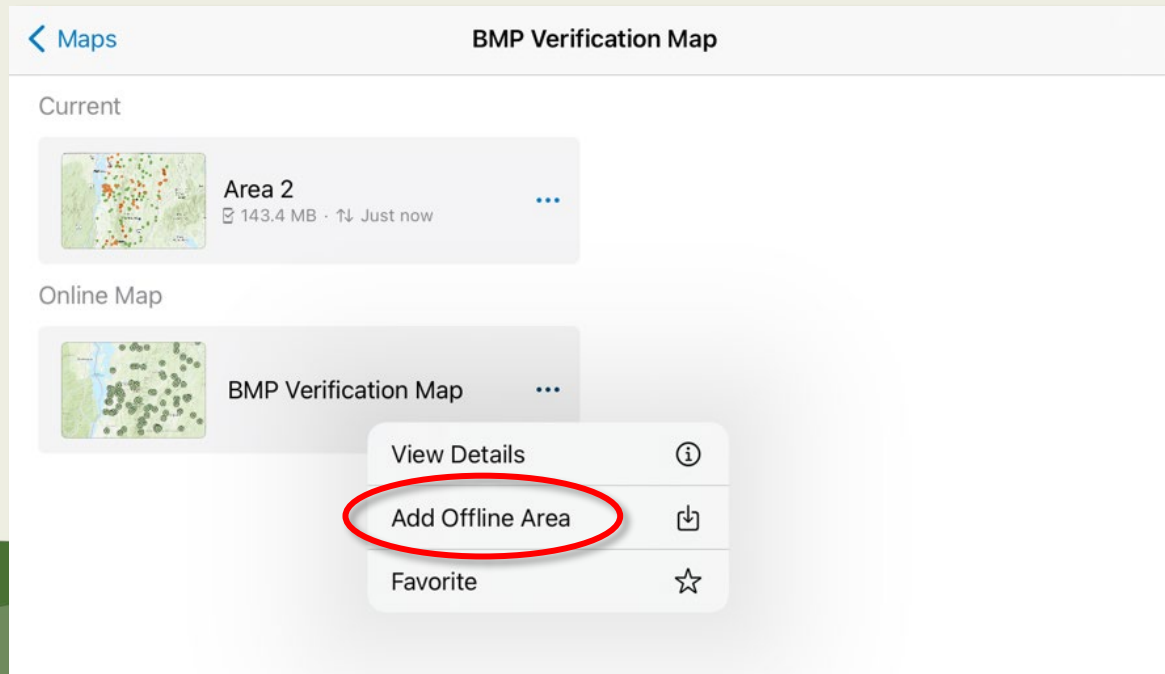
Sign into Field Maps

Open BMP Verification Map

Download offline map section

To access the BMP Verification Map offline, select the drop-down options menu next to the name of the map and select "Add Offline Area" to download a section of the map.

Key Takeaways:

- Field Verification process uses two applications: Survey123 and Field Maps.

- Join Clean Water Project Verification Group to gain access to appropriate maps/checklists.

- Review applications and checklists prior to Training Part 2.

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Training Part 2: Verification Process

- 9:30 – 11:00, Wednesday July 10th
- We will review the full process for planning, visiting, and reporting on a verification site visit.

- Visit [Verification and O&M webpage](#) to register.

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O&M Trainings

	Training Topic	Target Audience	Description
Tier 1	★ O&M of Clean Water Projects	CWSP staff, current and potential **verifiers**, BWQC members, municipal staff, maintainers responsible for multiple sites, DEC technical program staff	Roles and responsibilities in the O&M program.
	Site Access Agreements	CWSP staff, interested landowners, project implementors	Provide orientation to the new agreement templates.

Verification Resources

- **Clean Water Project Verification SOP**

    - Appendix A: Checklist User Guides

    - Appendix B: Site Visit Preparation checklist

    - Appendix C: Verification Project Info Template

- **Guidance:** [Background on the Law, Rule and Guidance | Department of Environmental Conservation (vermont.gov)](#)

- **DEC O&M Website:** [Clean Water Project Verification | Department of Environmental Conservation (vermont.gov)](#)

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Thank you for listening! Questions?

Post Training Survey

For follow up questions, please email us:

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