Zouti estanda konsepsyon RMAT pou rezistans klima

Apèsi sou lekòl la

Jen 2024

Executive Office of Energy and Environmental Affairs

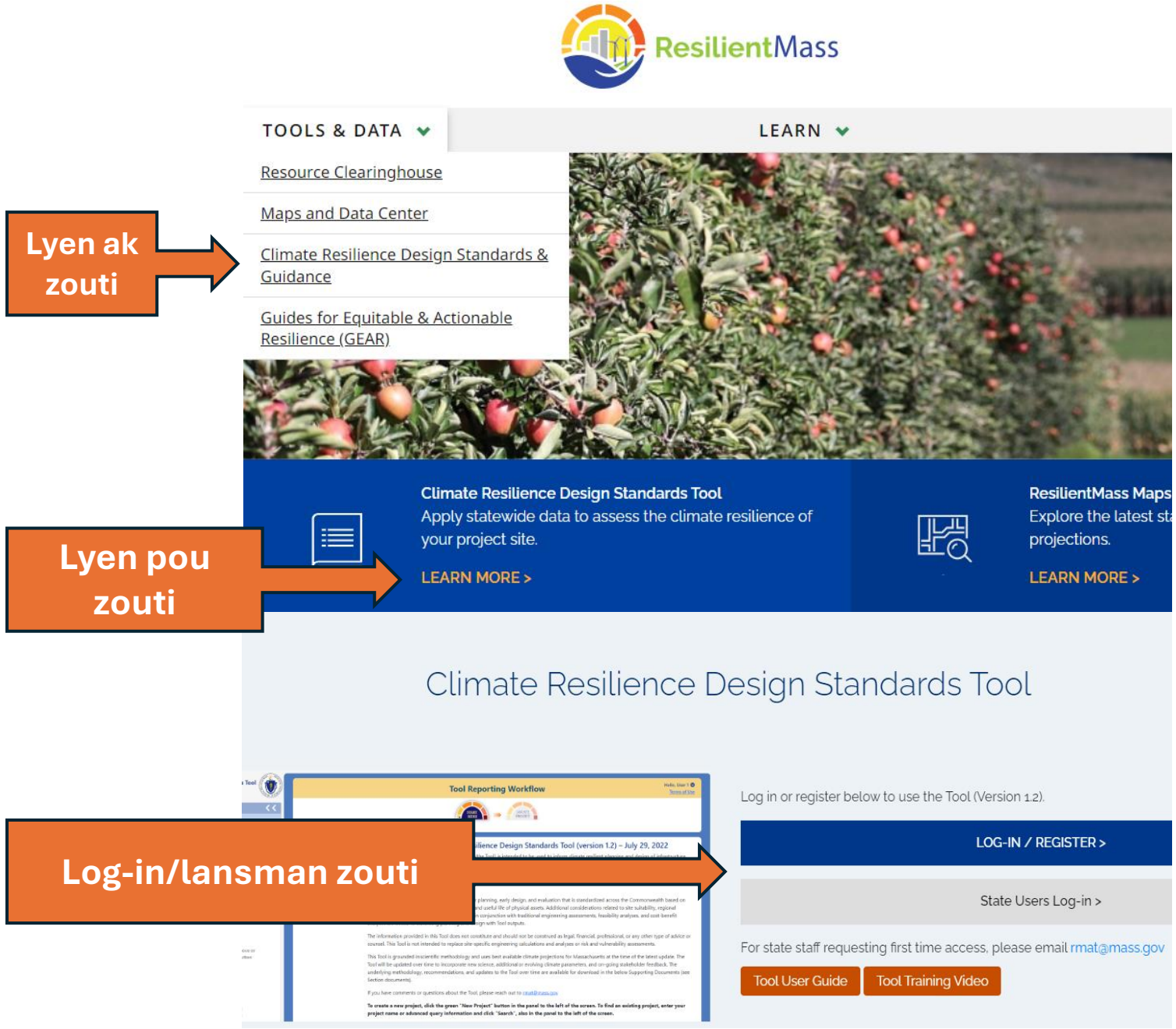
ResilientMass
Climate Adaption Clearinghouse for the Commonwealth

MASSACHUSETTENSIS SIGILLUM REIPUBLICÆ

Objektif

Zouti yo:

- Fè analiz preliminè rezistans klimatik **pi lajman aksesib**
- Enfòme **"klima entelijan"** planifikasyon kapital, konsepsyon pwojè ak akizisyon
- Bay rekòmandasyon ki baze sou **itilizasyon ki konsistan** nan done klima eta a
- Bay yon zouti sipò planifikasyon ak konsepsyon inifye ajans leta yo ka itilize pou administre pwogram sibvansyon yo
- Bay **enfòmasyon ki konsistan pou minisipalite yo** òganize sou **resilient.mass.gov**

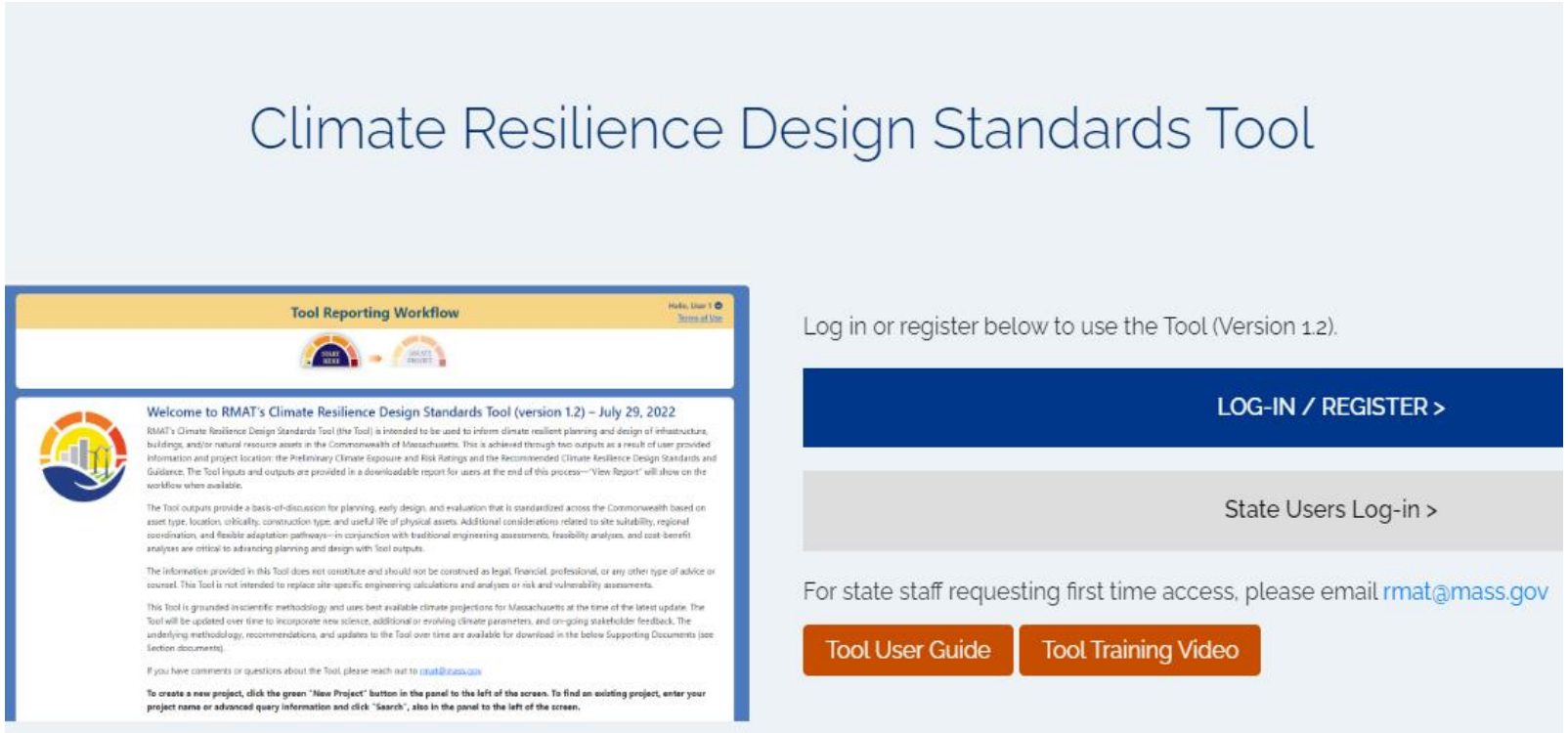


https://resilient.mass.gov/

Lè pou itilize zouti sa a:

Rezilta Zouti yo bay yon baz diskisyon pou planifikasyon, konsepsyon bonè, ak evalyasyon ki estandadize atravè Commonwealth la ki baze sou kalite byen, kote, kritik, kalite konstriksyon, ak lavi itil nan byen fizik.

- **Planifikasyon pwojè, konsepsyon ak akizisyon**
- Anplasman pwojè
- Amelyore yon aplikasyon sibvansyon leta



https://resilient.mass.gov/rmat_home/designstandards/

Resous kle ki disponib:

Log in or register below to use the Tool (Version 1.2).

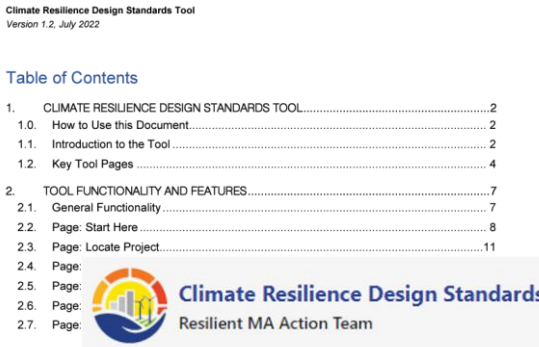
LOG-IN / REGISTER >

State Users Log-in >

For state staff requesting first time access, please email rmat@mass.gov

Tool User Guide | Tool Training Video

Gid itilizatè



Climate Resilience Design Standards Tool
Version 1.2, July 2022

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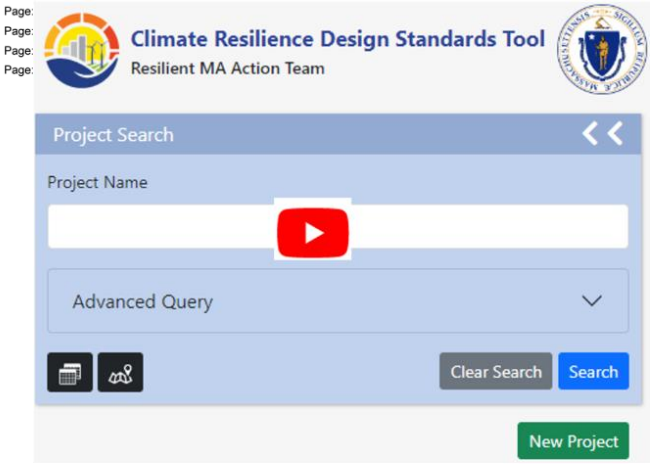
Videyo fòmasyon



Tool (V1.2) Training Video - February, 2023

Guidance and Best Practices

The Climate Resilience Design Guidance provides general design guidance to consider while implementing resilience principles that are not specific to project type or climate hazards, and are illustrated through exam the Guidance considerations and document decision making throughout the planning process.

Guidance and Best Practices PDF

Additional forms include:

- Site Suitability
- Regional Coordination
- Flexible Adaptation Pathways

Gid pou konsepsyon rezistans klimatik ak pi bon pratik

Table 1.1. Climate Resilience Design Guidance Best Practices

Considerations	Best Practice
Site Suitability (SS)	1. Reduce exposure to climate hazards 2. Mitigate adverse climate impacts and provide benefits 3. Protect, conserve, and restore critical natural resources on-site and off-site
Regional Coordination (RC)	1. Assess regional context of vulnerability 2. Evaluate impacts beyond site-specific design 3. Optimize capital investment opportunities 4. Prioritize services and assets that serve vulnerable populations
Flexible Adaptation Pathways (AP)	1. Embed future capacity and design for uncertainty 2. Design for incremental change 3. Encourage climate mitigation and other co-benefits 4. Prioritize nature-based solutions 5. Prepare for current and future operational and maintenance needs

Dokimantasyon ak fòmasyon pou antre done teknik:

- Massachusetts Coast Flood Risk Model (MC-FRM) FAQ (April 6, 2022)
- Massachusetts Coast Flood Riks Model (MC-FRM) Online Trainings (April-May 2023)
- EEA's Climate and Hydrologic Risk Project - Weather Generator Technical Document (April, 2022)
- EEA's Climate and Hydrologic Risk Project - IDF Curves Technical Document (December, 2021)

https://resilient.mass.gov/rmat_home/designstandards/

Kòmanse

Konekte nan:
https://resilient.mass.gov/rmat_home/designstandards/

Itilizatè ekstèn yo dwe swiv sòsye enskri pou aksè premye fwa

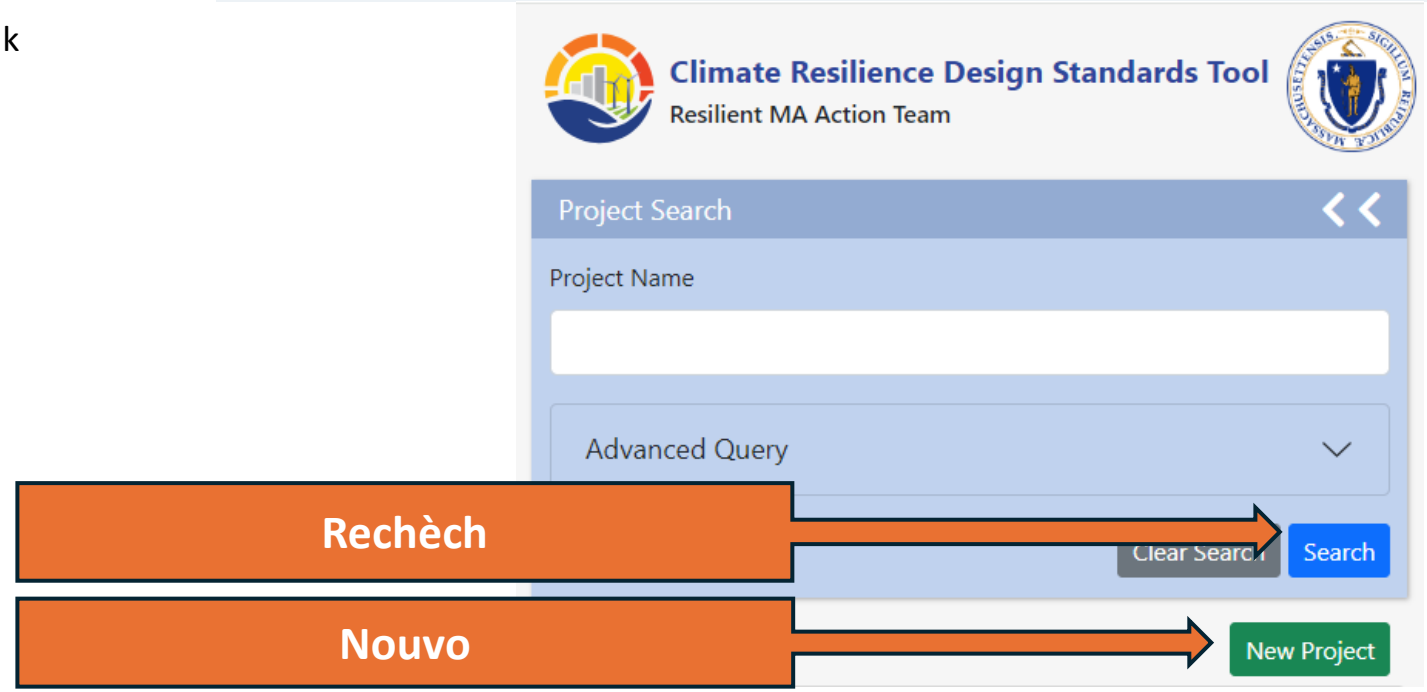
Itilizatè Eta yo ta dwe mande pou premye fwa aksè nan rmat@mass.gov

*Tan adisyonèl nesesè pou nouvo kont zouti ak @dot.state.ma.us adrès imèl

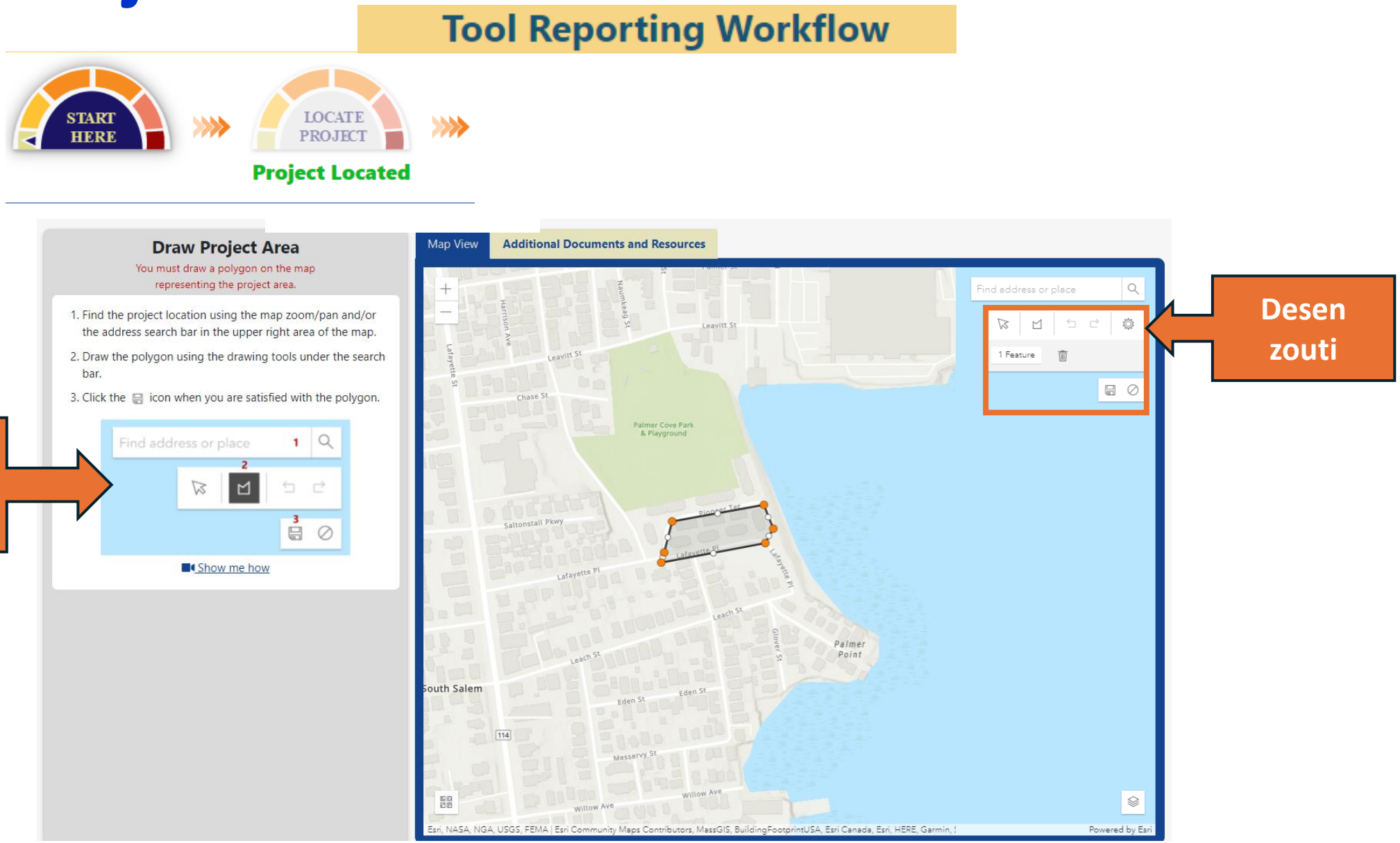
Rechèch pou pwojè ki egziste deja,

OSWA

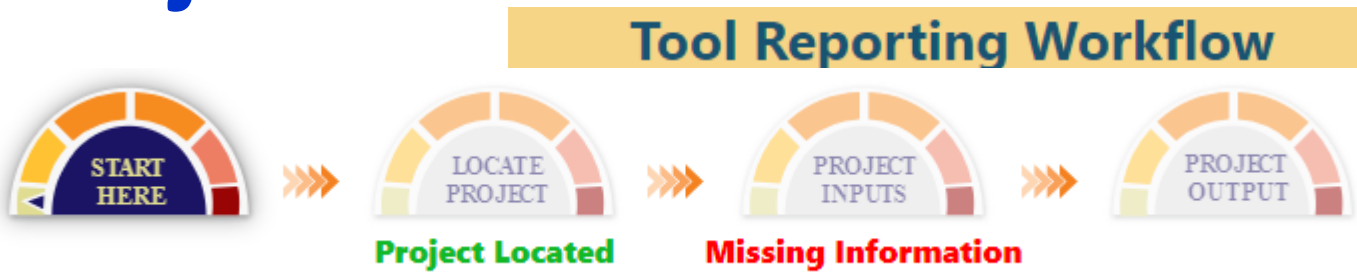
Klike sou **"Nouvo Pwojè"** Komanse

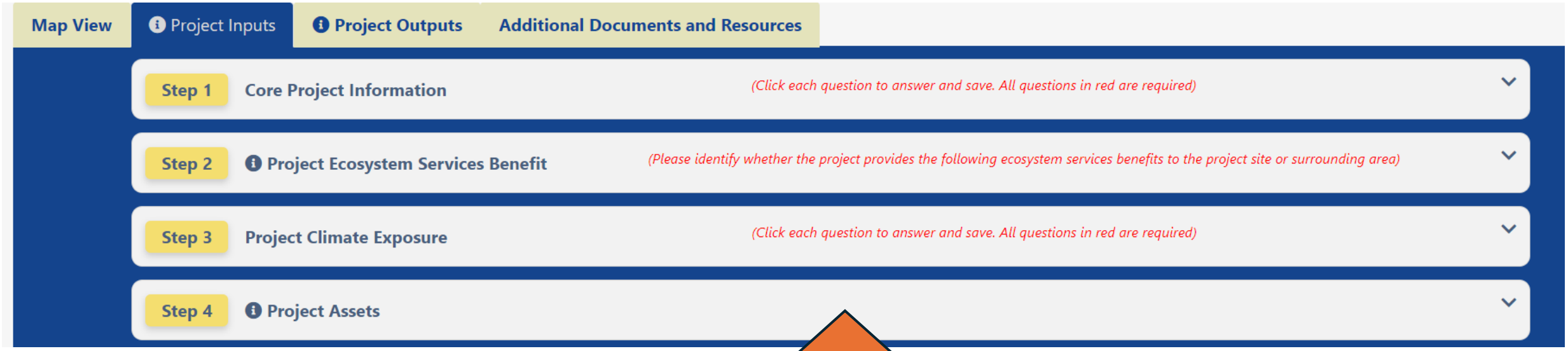


Antre pwojè


Tool Reporting Workflow
START HERE
LOCATE PROJECT
Project Located
Draw Project Area
You must draw a polygon on the map representing the project area.
1. Find the project location using the map zoom/pan and/or the address search bar in the upper right area of the map.
2. Draw the polygon using the drawing tools under the search bar.
3. Click the icon when you are satisfied with the polygon.
Find address or place
Show me how
Map View
Additional Documents and Resources
Find address or place
1 Feature
Trase anprent pwojè a
Desen zouti

Antre pwojè





Reponn kesyon opinyon pou kat etap:

1. **Enfòmasyon pratik**
2. **Benefis anviwònman pwojè a**
3. **Istwa ekspoze a danje**
4. **Byen enfòmasyon espesifik**

Antre pwojè

Tool Reporting Workflow

Dewoulman travay la ogmante yon fwa done yo te antre

2yèm ETAP: Benefis anviwònman an nan pwojè a

Step 2 Project Ecosystem Services Benefit

Provides flood protection through green infrastructure or nature-based solutions	No
Provides storm damage mitigation	No
Provides groundwater recharge	No
Protects public water supply	No
Filters stormwater	No
Improves water quality	No
Promotes decarbonization	Yes
Enables carbon sequestration	Yes
Provides oxygen production	No
Improves air quality	No
Prevents pollution	Yes
Remediates existing sources of pollution	No
Protects fisheries, wildlife, and plant habitat	No
Protects land containing shellfish	No
Provides pollination	No
Provides recreation	No

Gid (i)

3yèm ETAP: Istwa ekspoze danje

Step 3 Project Climate Exposure

Does the project site have a history of coastal flooding?	Yes
Does the project site have a history of flooding during extreme precipitation events (unrelated to water/sewer damages)?	No
Does the project result in a net increase in impervious area of the site?	No
Does the project site have a history of riverine flooding?	No
Are existing trees being removed as part of the proposed project?	No

4yèm ETAP: Enfòmasyon espesifik atif yo

Step 4 Project Assets

Building/Facility Add

UserGuide Building

Infrastructure Add

N/A

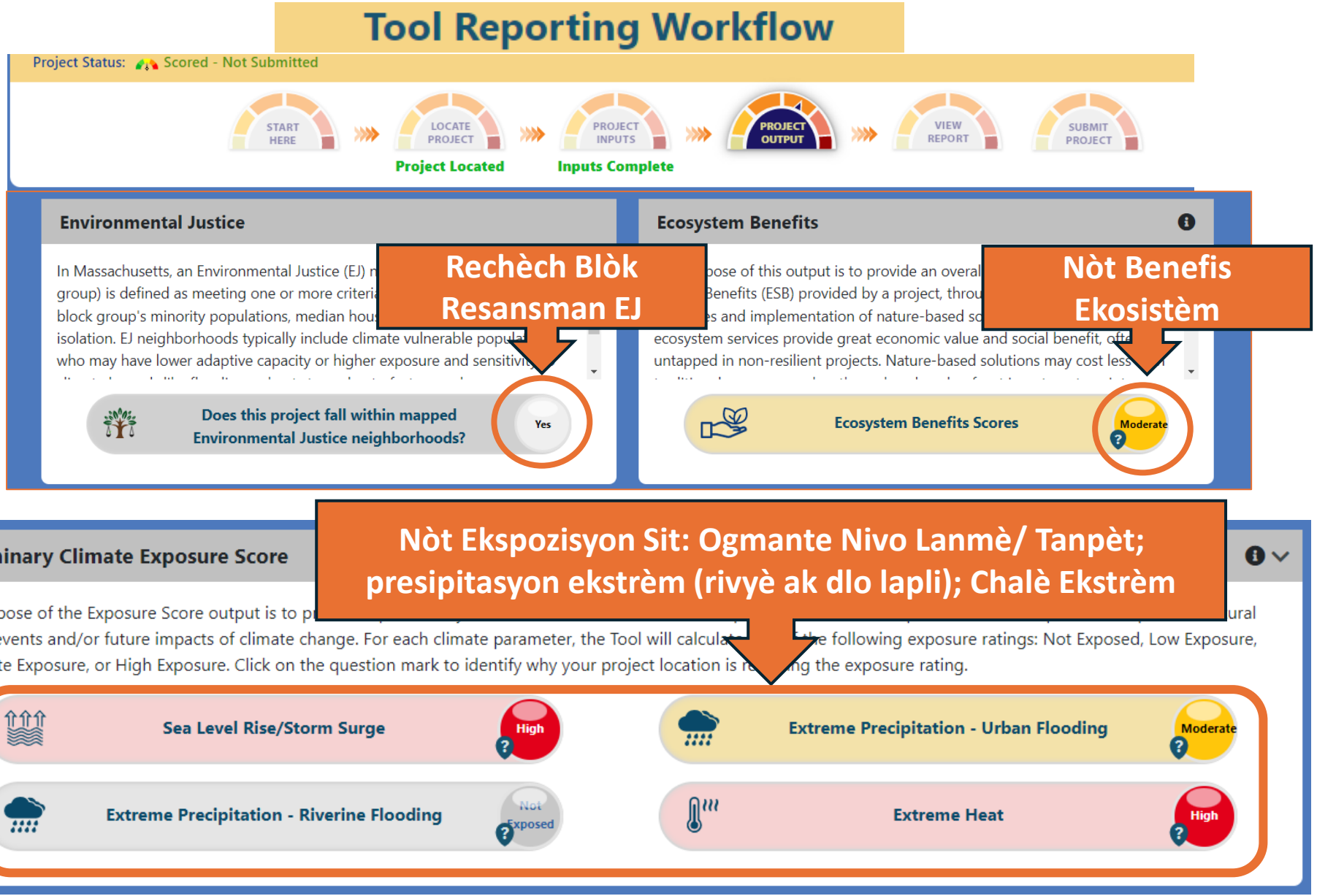
Natural Resources Add

N/A

Selected Asset:	UserGuide Building
Asset Type:	Typically Occupied
Asset Sub-Type:	Residential building - Public Housing
Construction Type:	Maintenance (critical repair)
Construction Year:	2025
Useful Life:	15

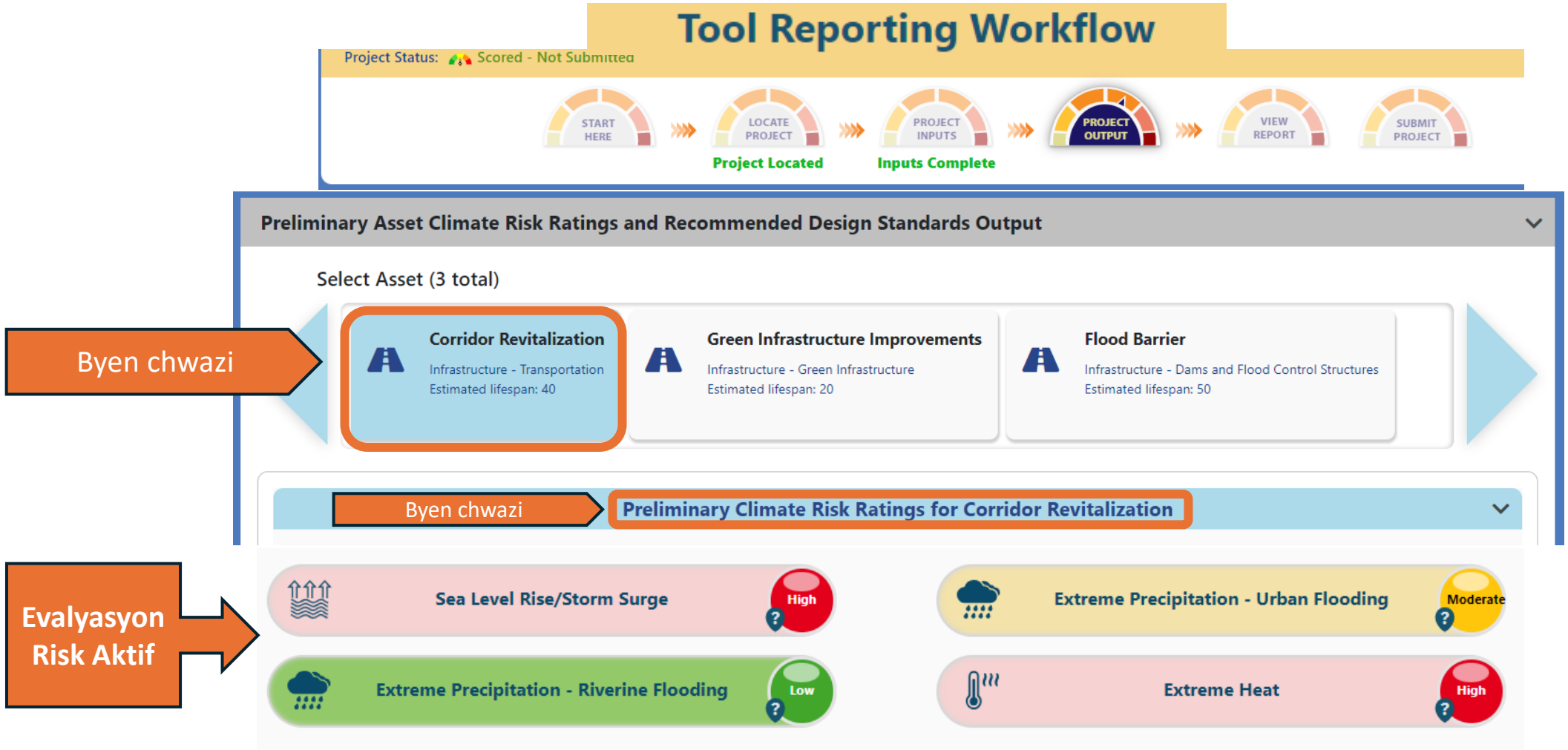
Identify the length of time the asset can be inaccessible/inoperable without significant consequences.	Building must be accessible/operable at all times, even during natural hazard event
Identify the geographic area directly affected by permanent loss or significant inoperability of the building/facility.	Impacts would be limited to local area and/or municipality
Identify the population directly served that would be affected by the permanent loss of use or inoperability of	Less than 1,000 people

Rezilta: Nòt Nivo Pwojè



Rezilta: Nòt Nivo Pwojè

Sòti: Evalyasyon risk klima aktif yo

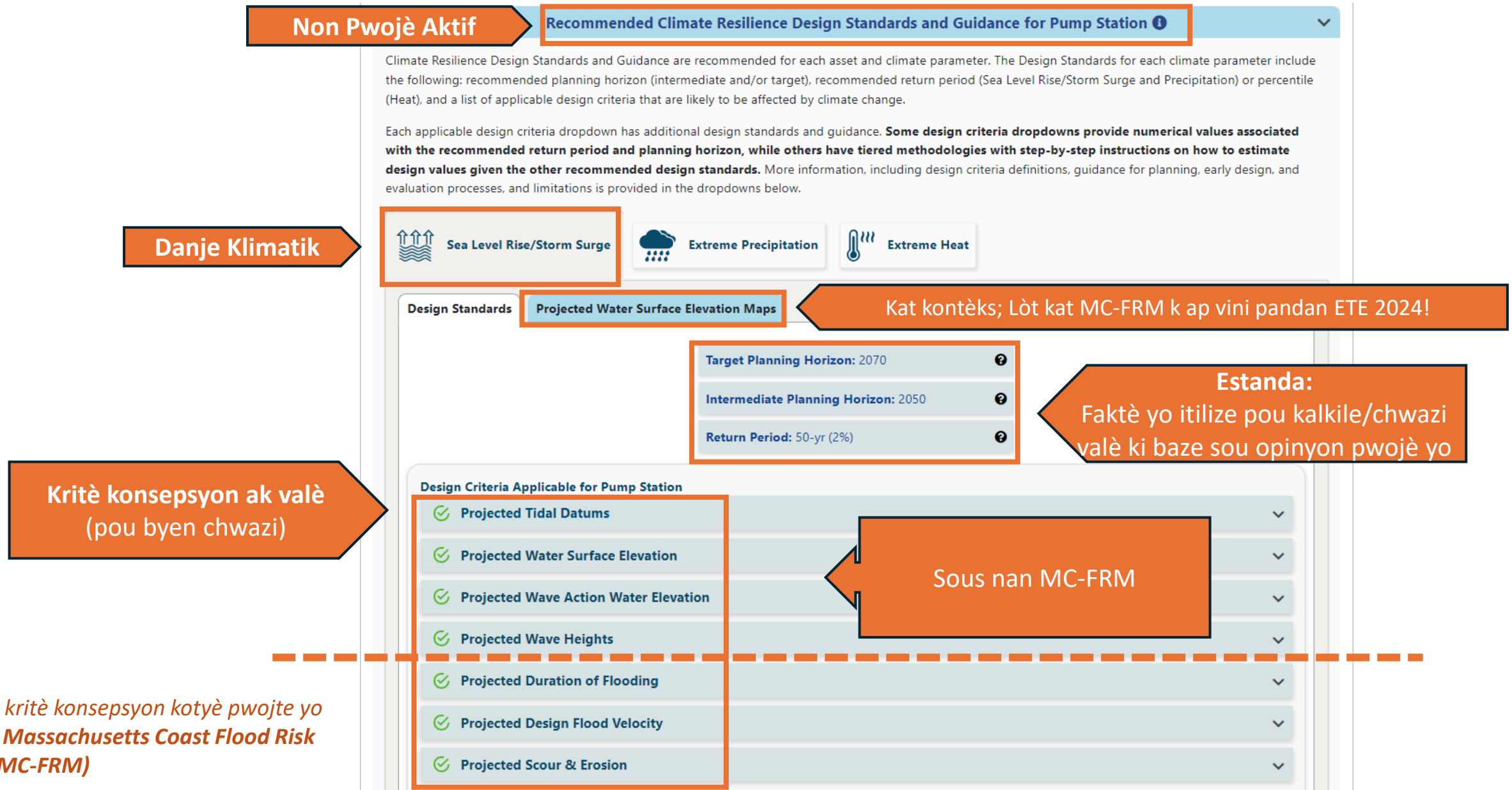


Pwojè zouti ka akomode plizyè byen

*Pral resevwa **risk** evalyasyon klimatik pou **chak byen** ki te antre*

REMAK: Pandan li posib pou jwenn yon nòt **pwojè** "pa ekspoze" pou "Ogmantasyon Nivo Lanmè/Vag Tanpèt" oswa "Presipasyon Ekstrèm - Inondasyon Rivyè" paske li depann jeyografikman, zouti a ap toujou bay yon **nòt risk** (enferyè).

Rezilta: Estanda/Kritè Konsepsyon (Inondasyon Kòt)



*Pifò nan kritè konsepsyon kotyè pwojte yo soti nan **Massachusetts Coast Flood Risk Model (MC-FRM)***

Rezilta: Konsey Valè Konsepsyon (Inondasyon Kòt)

Design Criteria Applicable for Pump Station

Projected Tidal Datums

Projected Water Surface Elevation

Non Estanda Konsepsyon/Valè

Definition

Projected Water Surface Elevation is the projected elevation for a specific future flood event, considering storm surge, tides, and wave setup. Wave setup, as included in water surface elevation, is defined by FEMA as "an increase in the total stillwater elevation against a barrier (dunes, bluffs, or structures) caused by breaking waves." (https://www.fema.gov/sites/default/files/2020-02/Coastal_Wave_Setup_Guidance_Nov_2015.pdf).

Projected Water Surface Elevation Values:

Eksplikasyon sou valè

The projected modeled elevations may vary across large sites due to variations in the site's physi
presented as a maximum, minimum, and area weighted average values in the table below. The a
value corresponding to the projected Water Surface Elevation of the project site.

Valè (yo) pou byen chwazi yo

Asset Name	Recommended Planning Horizon	Recommended Return Period	Max (ft - NAVD88)	Min (ft - NAVD88)	Area Weighted Average (ft - NAVD88)
Pump Station	2050	2% (50-Year)	12.1	12.0	12.0
	2070		13.9	13.8	13.8

How Water Surface Elevation may inform Planning

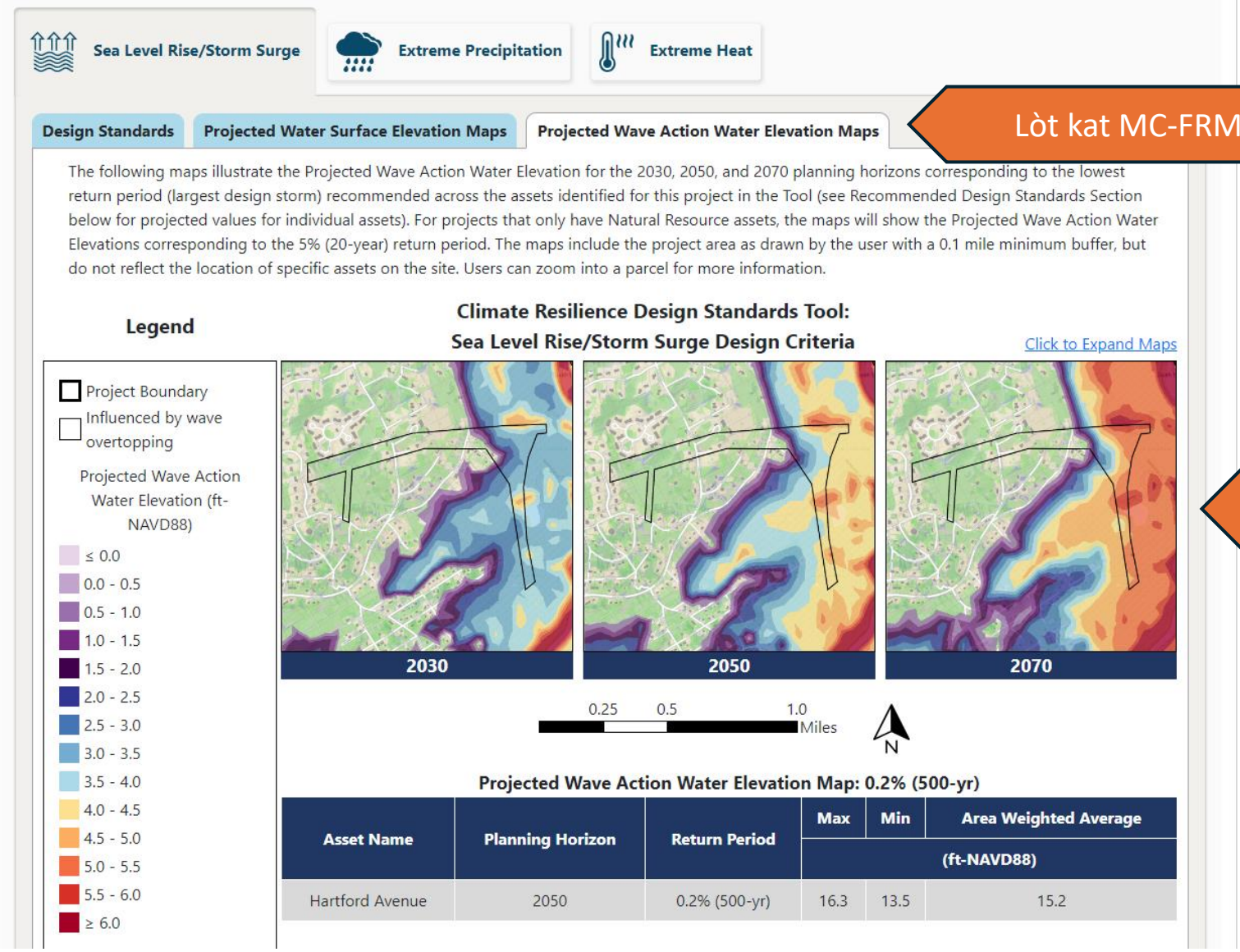
How Water Surface Elevation may inform Early Design

How Water Surface Elevation may inform Project Evaluation

Gid sou fason pou itilize valè pandan Planifikasyon, Konsepsyon Bonè, ak *Evalyasyon Pwojè (egzanp, MEPA)*

Limitations for Projected Water Surface Elevation Values, Standards, and Guidance

Sòti: Kat Inondasyon Kòt



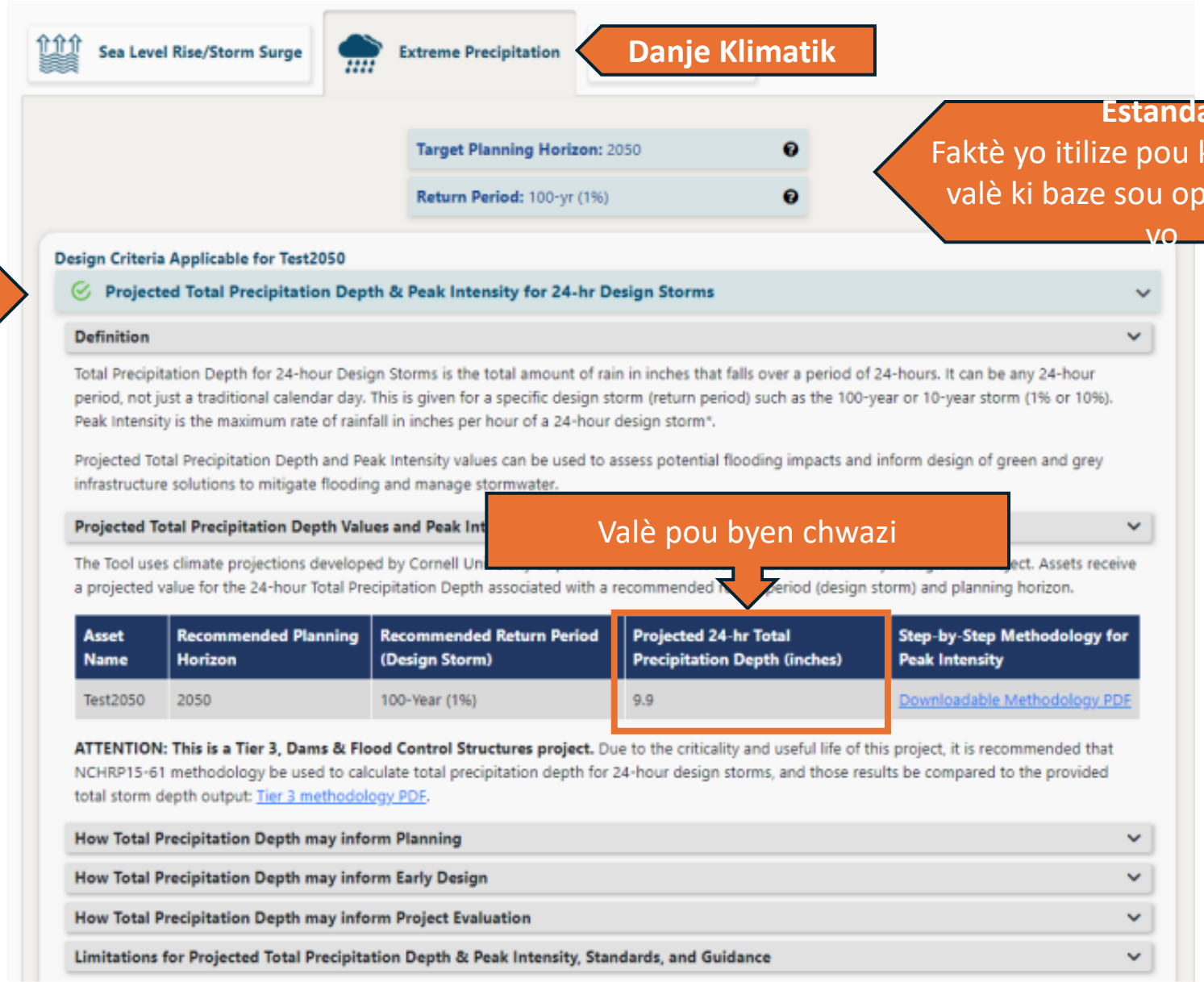
Asset Name	Planning Horizon	Return Period	Max	Min	Area Weighted Average
			(ft-NAVD88)		
Hartford Avenue	2050	0.2% (500-yr)	16.3	13.5	15.2

Lòt kat MC-FRM k ap vini pandan ETE 2024!

Sit pwojè a ak yon kontèks vi ki limite nan inondasyon kotyè yo prevwa

*Pifò nan kritè konsepsyon kotyè pwojte yo soti nan **Massachusetts Coast Flood Risk Model (MC-FRM)***

Sòti: Estanda/Kritè Konsepsyon (Presipasyon)



Estanda:
Faktè yo itilize pou kalkile/chwazi valè ki baze sou opinyon pwojè yo

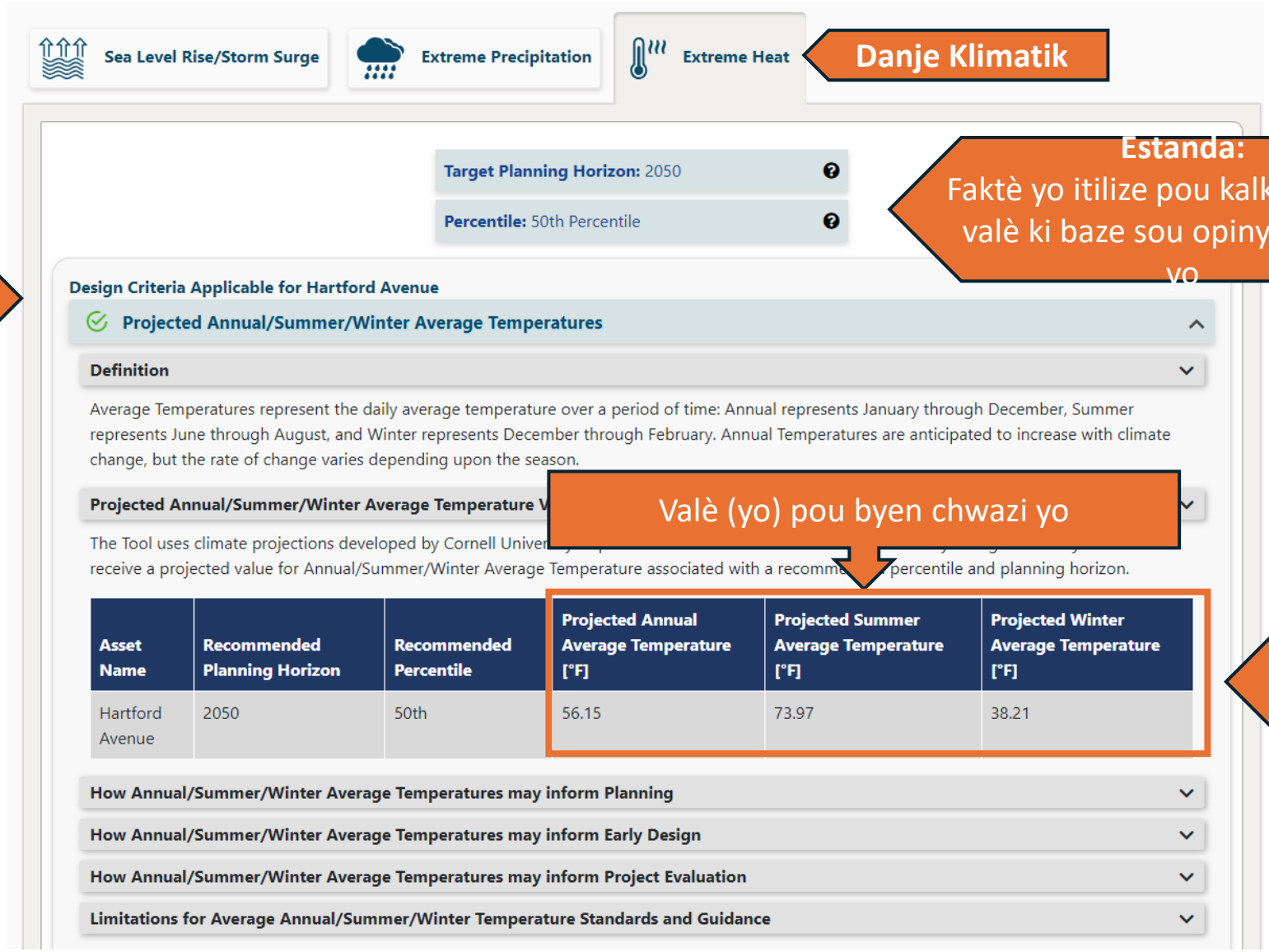
Kritè konsepsyon ak valè
(pou byen chwazi)

*Pral resevwa estanda ki rekòmande ak kritè konsepsyon pou **chak byen** yo antre*

*Eksplore **valè presipitasyon tanpèt konsepsyon adisyonèl** sou tablodbò ekstèn:*

https://mass-eoeea.maps.arcgis.com/apps/dashboards/2e8534bc2a7849b0aa6f64d0f79a8937

Sòti: Estanda/Kritè konsepsyon (tanperati)



Telechaje Rapò Pwojè a

Afiche rezime rapò a sou **View Report** paj pwosesis travay

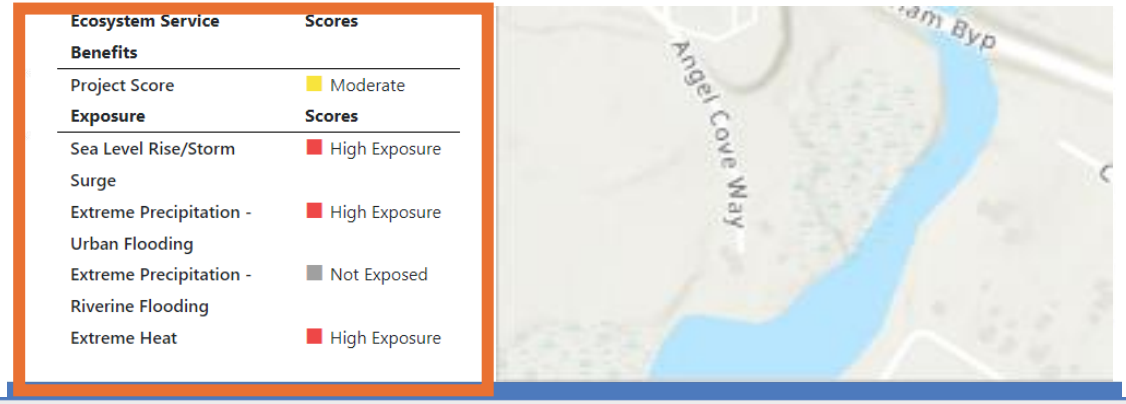
Telechaje rapò pwojè a sou fòma PDF

Klike sou **"Soumèt"** rapò

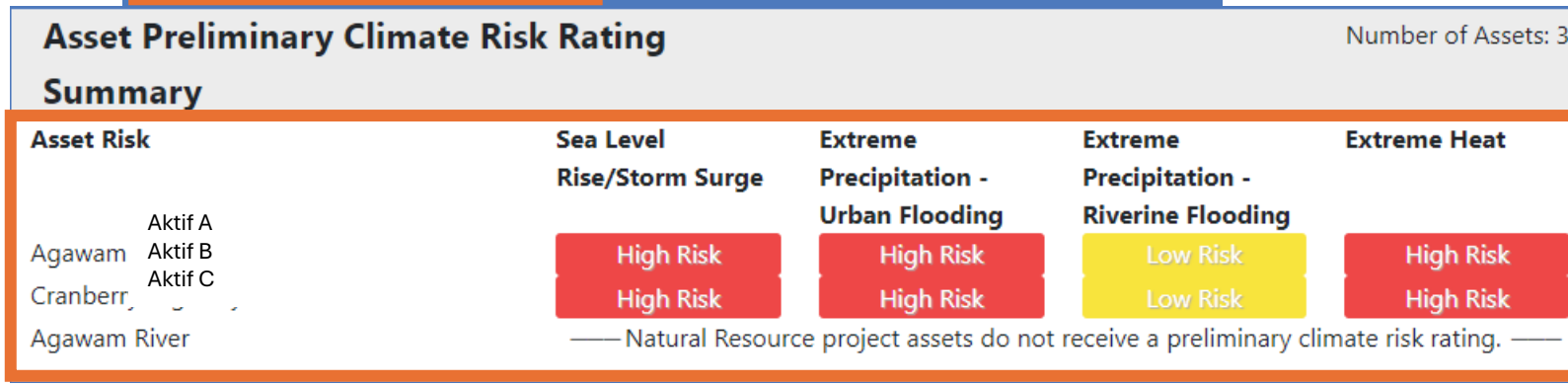
Telechaje/anekse fichye PDF nan pòtal sibvansyon respektif/depoze MEPA

Gade paj Rapò a

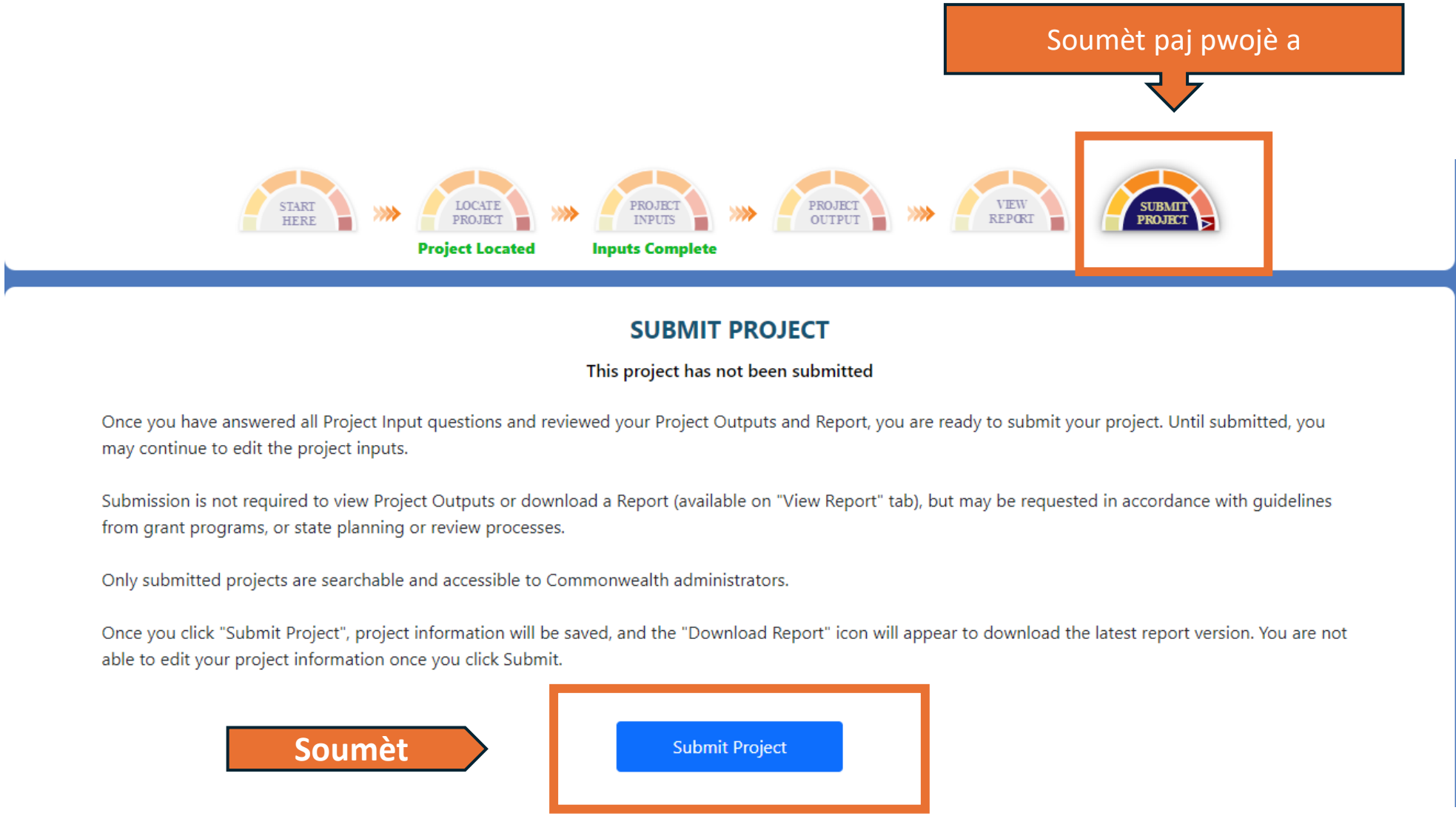
Nòt konplè ekspozisyon sit pwojè yo



Evalyasyon Risk Aktif *(pou chak byen)*

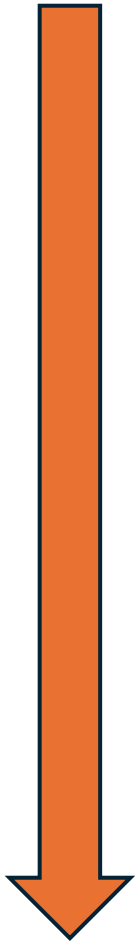


Soumèt Rapò Pwojè



Klike sou **"Soumèt"** rapò

Zouti vèsyon istwa



Zouti Beta (avril 2021)

- MVP ak Massworks te mande zouti rapò nan aplikasyon pou sibvansyon

Vèsyon 1.0 (fevriye 2022)

- Mizajou ekspozisyon klimatik
- Mizajou benefis sèvis ekosistèm yo
- Lòt konsèy nan zouti

Vèsyon 1.1 (avril 2022)

- **Rezilta MC-FRM Nivo 2** (tablo dinamik pou kritè konsepsyon kotyè ki aplikab yo)
- Pwojè Risk idwolojik klimatik MA (tablo dinamik pou kritè konsepsyon presipitasyon ekstrèm ki aplikab)

Vèsyon 1.2 (Jiyè 2022)

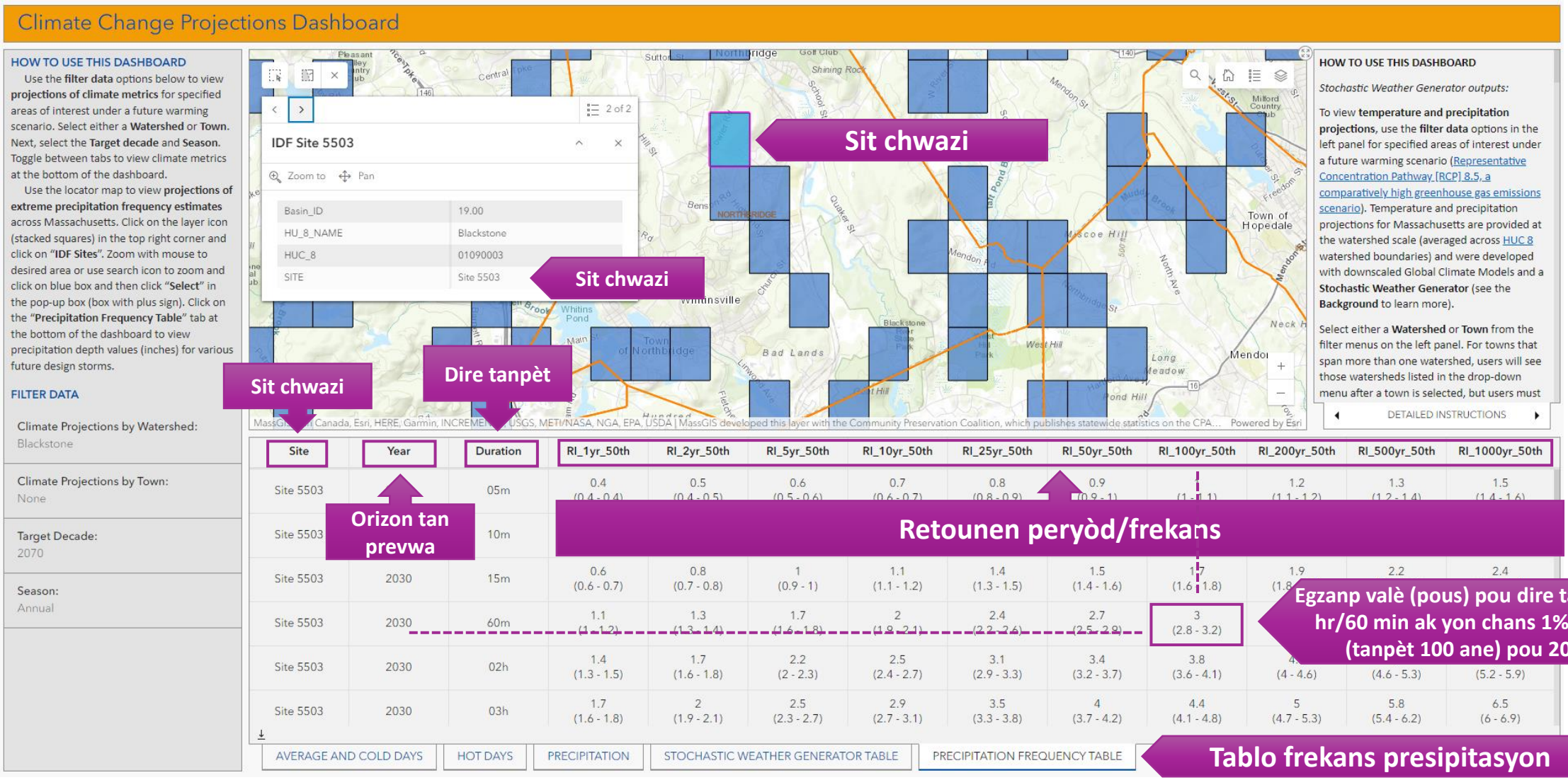
- **MC-FRM Pwojete Kat Elevasyon Sifas Dlo** (koòdone entèaktif nan zouti ak kat enprime nan rapò pwojè)

Vèsyon 1.3 (2024) - an pwogrè

- Mizajou nan estanda konsepsyon tanperati (**ajoute** valè kalkile nan koòdone zouti)
- Lòt kat MC-FRM (**Kalkil nivo dlo akòz aksyon vag**)
- Koreksyon ensèk

Resous ki gen rapò:

Valè presipitasyon ki enfòme sou klima (Entansite-Dire-Frekans)



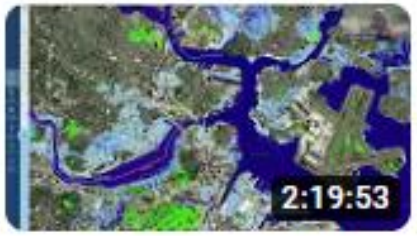
https://mass-eoeea.maps.arcgis.com/apps/dashboards/2e8534bc2a7849b0aa6f64d0f79a8937

Resous ki gen rapò: Modèl Risk Inondasyon Kòt Massachusetts (Massachusetts Coast Flood Risk Model, MC-FRM)

Videyo fòmasyon

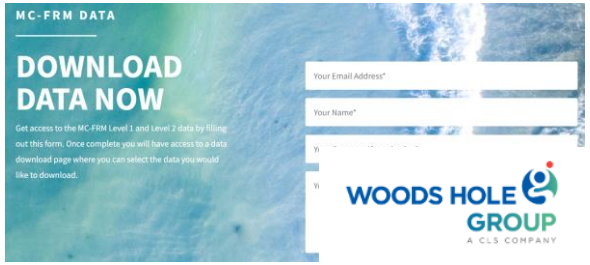
1

2

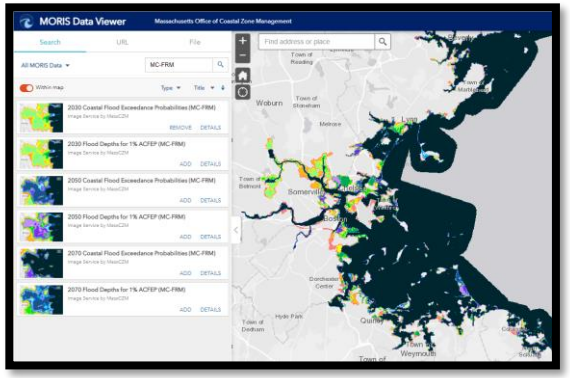


3

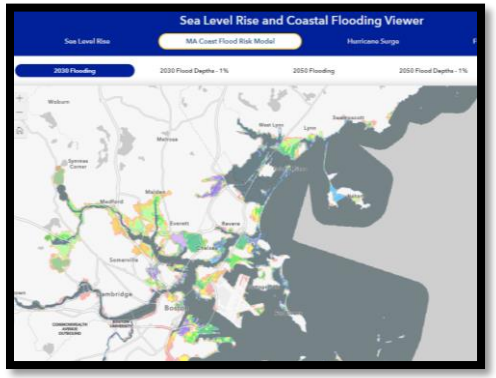
Telechaje Paj Done



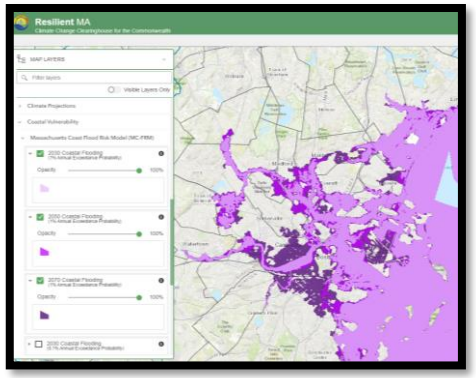
Espektatè Done Eta yo



Done Viewer MORIS CZM



Ogmantasyon nivo lanmè CZM a ak Viewer inondasyon kotyè yo



ResilientMass Climate & Hazards Viewer

ResilientMass

Climate Adaption Clearinghouse for the Commonwealth

Kontakte
rmat@mass.gov
pou nenpòt kesyon!

*NÒT: Pa gen okenn anplwaye aplentan devwe pou sipòte pwoblèm teknik ki gen rapò ak zouti a, kidonk, tanpri pèmèt omwen twa a senk jou ouvrab pou rezoud pwoblèm yo.