

Millennium Hope Hills

~ Learning from the Great East Japan Disaster



Symbol of Reconstruction

Millennium Hope Hills (Sennen-Kibo-no-Oka) is a group of hills that were built in between the coast of Iwanuma city and Teizanbori canal* that represent the reconstruction of Iwanuma city. They utilized the recycled debris from the Great East Japan Earthquake and Tsunami, and the tallest hill reaches 11 meters above the ground. As of March, 2017, there are fifteen hills located along the coast for approximately 10km.

Each hill is connected by trails (green embankment) that reduce the power of a tsunami. Millennium Hope Hills also works as a shelter. Many people from all over the world have been visiting Millennium Hope Hills to plant trees, and 300,000 trees were planted by 2017. The trails are 3 meters tall each, and trees will grow and become a protection forest for future generations.

*Teizanbori Canal

The longest canal in Japan that took approximately 280 years to build since the construction that began back in the days of Date Masamune. Teizan is Date Masamune's posthumous name.

Multiple options of protection against tsunamis

The Great East Japan Earthquake and Tsunami made us realize it was almost impossible to block a tsunami completely. However, it is possible to reduce the damage caused by a disaster. Iwanuma city has been striving to take multiple actions to defend itself from a tsunami based on the concept of "disaster reduction."

System of Multiple Protection

1st Protection : Seawall (7.2m)

2nd Protection : Millennium Hope Hills
(Sennen-Kibo-no-Oka) (9~11m)

3rd Protection : Shoreline Protection on Teizanbori Canal (3.7m)

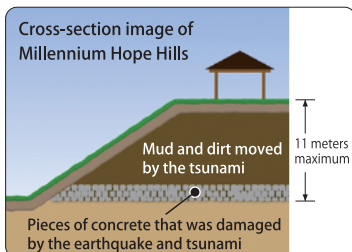
4th Protection : Raised Roads (4~5m)

We developed four ways of protection to make more time for people to escape from a tsunami. We also developed evacuation routes that go to inland areas from the coastal areas for people to escape all at once.



Let's think

Why did they use recycled debris to build Millennium Hope Hills



2nd Millennium Hope Hills Planting Ceremony 2014



Let's think

How does Millennium Hope Hills reduce the risk of future disasters?



① Seawall



② Millennium Hope Hills



③ Protection walls at Teizanbori Canal



④ Raised roads

Whole figure of Millennium Hope Hills (Sennen-Kibo-no-Oka)

- ① Seawall
- ② Trails
- ③ Protection walls at Teizanbori Canal
- ④ Raised roads
- Millennium Hope Hills



Situation of damages caused by the Great East Japan Earthquake and Tsunami

The Great East Japan Earthquake and Tsunami

- Time of Occurrence : 2:46PM Friday, March 11, 2011
- Epicenter : Sanriku Coast
(Approximately 130km east-southeast of Oshika peninsula)
※ due east of Iwanuma city
- Focal depth: approximately 24km
- Size of the Earthquake: Magnitude of 9.0
- Seismic Intensity: Lower 6 (Iwanuma city)
*maximum seismic intensity: 7 (Kurihara City, Miyagi Prefecture)

Iwanuma City

(As of January 31, 2014)

- 👤 Victims : 181 (1 of whom still missing)
- 🏠 Damaged houses : 5,428
- 🚶 Evacuees : 6,825 (26 shelters)
- 🌊 Flooded area caused by the tsunami
Approximately 29km² (48% of the city area) The biggest percentage of damage in all municipalities in the coastal area
Approximately 5km² of which sank below the sea level.
- 💡 Electricity: Blackout on all houses
→ Restored on March 21 except for the coastal area
- 💧 Water: No water flow to all houses
→ Restored on May 17 except for the coastal area
- 🚰 Sewer: Kennan Purification Center was damaged
→ Fully restored after two years



Let's think

How would you live if you had no electricity or water?



Area around Tamaura Community Center



Area around Sendai Airport



Area around Watari Ohashi



People waiting for water supplies



Searching led by the Self Defense Forces

It is possible to predict tsunamis that follow an earthquake.



● From Director, International Research Institute of Disaster Science, Professor Fumihiko Imamura

When an earthquake happens, it moves the faults* and causes an upheaval and sedimentation of the ocean bottom. This causes changes to the surface of the ocean, which eventually turn into a tsunami. After an earthquake hits, tsunami usually takes several minutes or several tens of minutes to reach the coastal area. It is hard to predict earthquakes, but we can predict tsunami based on statistical simulations and database.

※ Fault: a cross-section that appears when underground bedrocks get pressured by surrounding forces

Earthquake/Tsunami drill



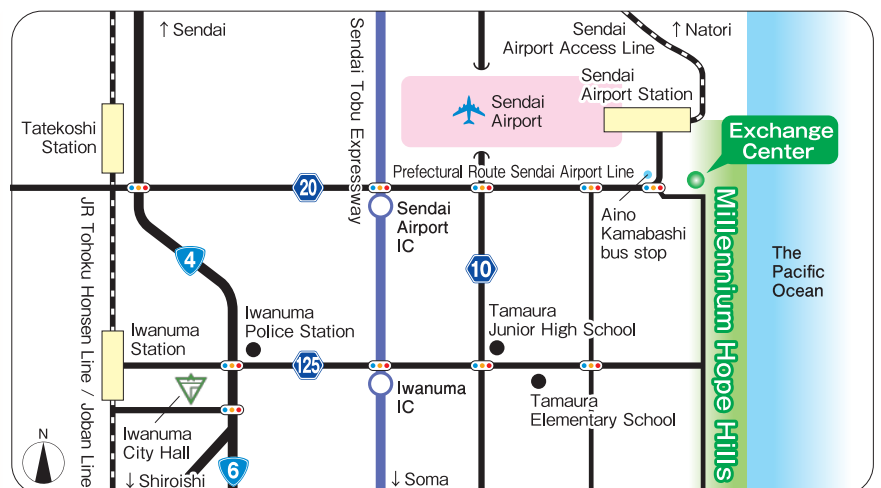
Schools and regions have been implementing earthquake/tsunami drills. It is very important to participate in such events with your family and neighbors to prepare yourself for a disaster.



Let's think

How much time do we need to escape from a tsunami?

How to access the Exchange Center, Millennium Hope Hills (Sennen-Kibo-no-Oka), Iwanuma City



Airplane Approximately 17 minutes on foot from Sendai Airport (approximately 1.5km)

Car From "Sendai Airport IC" on Sendai Tobu Expressway
Approximately three minutes on prefectural route Sendai Airport line (approximately 4.5km)

Train By Sendai Airport Access Line from Sendai Station
17 minutes on foot from "Sendai Airport Station" (approximately 1.5km)

Bus By Iwanuma City Bus (Airport Line) from Iwanuma Station
8 minutes on foot from "Aino-Kamabashi" (approximately 1km)

Contact Information

Iwanuma City Millennium Hope Hills (Sennen-Kibo-no-Oka) Exchange Center
〒989-2421 177 Shimonogo Aza Hama, Iwanuma City, Miyagi Prefecture, Japan TEL・FAX +81-223-23-8577 (Japanese only)

◇ Open hours: 9AM ~ 5PM
◇ Closed days: New year's holidays (December 26 ~ January 7)