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Presented by: Alena Baldwin-Brown

NJ Water Monitoring Summit

December 1, 2011

NJDEP-Barnegat Bay - Windows Internet Explorer

http://www.state.nj.us/dep/barnegatbay/

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NJDEP-Barnegat Bay

Governor Chris Christie • Lt.Governor Kim Guadagno

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SUBSCRIBE HERE to receive DEP's Barnegat Bay Action Update

Barnegat Bay

On December 9, 2010, Governor Christie announced a comprehensive action plan to address the health of Barnegat Bay: read the announcement here.

The ecological health of Barnegat Bay is in decline, threatening the economic health of the region. This Administration has made addressing the degradation of Barnegat Bay—including resolving the issue of a cooling system at the Oyster Creek nuclear power plant—one of its top environmental priorities.

The 660-square-mile Barnegat Bay watershed encompasses most of the 33 municipalities in Ocean County and four municipalities in Monmouth County. Barnegat Bay's 75-square-mile estuarine system consists of aquatic vegetation, shellfish beds, finfish habitats, waterfowl nesting grounds and spectacular vistas, plus a population of more than 550,000, which balloons during the summer season.

Long appreciated for its great aesthetic, economic and recreational value, an array of human impacts potentially threaten the ecological integrity of this backbay system.

The entire watershed has undergone dramatic growth since 1950, resulting in land use changing from principally undeveloped and agricultural to suburban. Development of the areas surrounding Barnegat Bay has resulted in both a decrease in the natural landscape that helps filter pollutants before they enter the Bay, and an increase in impervious ground cover (such as pavement and buildings) which further limits the ability of the land to regulate what gets into the Bay. Surface and groundwater quality in the watershed have been degraded by nonpoint source pollution and infiltration to groundwater has been prevented by increased impervious surfaces. The estuary's fisheries and other biological resources also have been negatively impacted by nonpoint source pollution and habitat loss. Boat and personal watercraft traffic on the Bay has grown significantly, raising concerns about the cumulative impacts on the Bay's water quality and aquatic habitat.

Addressing these issues requires complex and multiple tactics. Different parts of the Bay experience different levels of impact. The Bay cannot be restored to a pristine condition, but further degradation can be prevented and some restoration is possible. Input gained from extensive stakeholder involvement complemented the scientific data and research conducted

Barnegat Bay Blitz
A Watershed-Wide Clean-Up!

Click here for more information about the Blitz and cleanup results from around the watershed.

What's New

- Participate in Barnegat Bay's *King Tide Photo Contest* (pdf)
- Barnegat Bay Comprehensive Research 2011-2012 (NJDEP Office of Science)
- Barnegat Bay depths charted: Undersea map will help study pollution (Asbury Park Press)

More...

Links to each of the 10 Action Items at the bottom of the page

(Monitoring Project is part of **Action Item 7**)

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http://www.state.nj.us/dep/barnegatbay/plan-wqstandards.htm

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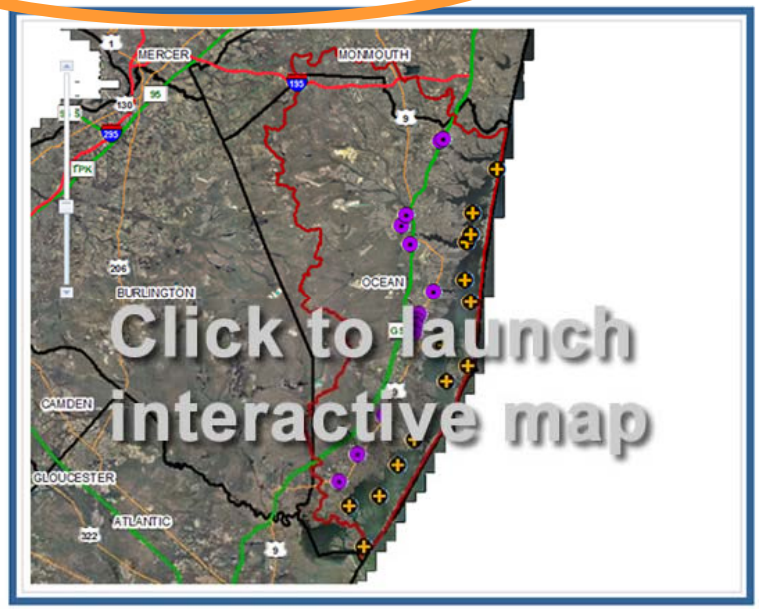
Comprehensive Plan of Action Item #7
Adopt More Rigorous Water Quality Standards



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After adopting narrative nutrient criteria for coastal waters on December 21, 2010, the DEP and its partners launched a new comprehensive ambient water quality monitoring network in the Barnegat Bay watershed on June 6, 2011. This network will provide water quality data that will establish the baseline conditions of the bay and assess these conditions against water quality standards. This information will then direct actions, including the possible establishment of a TMDL (Total Maximum Daily Load), needed to restore the bay.

The network is lead by DEP, with 9 partners. Within the network, water quality monitoring is taking place twice a month at 13 locations on tributaries to the bay and 14 locations within the bay itself. In addition, stream flow is being monitored at the 13 tributary locations. The map above displays each of these 27 monitoring locations. By clicking on each monitoring location, users can see the name and location of the monitoring site, which partner is doing the water quality and/or stream flow monitoring, link to partner websites as well as view photos of the site.

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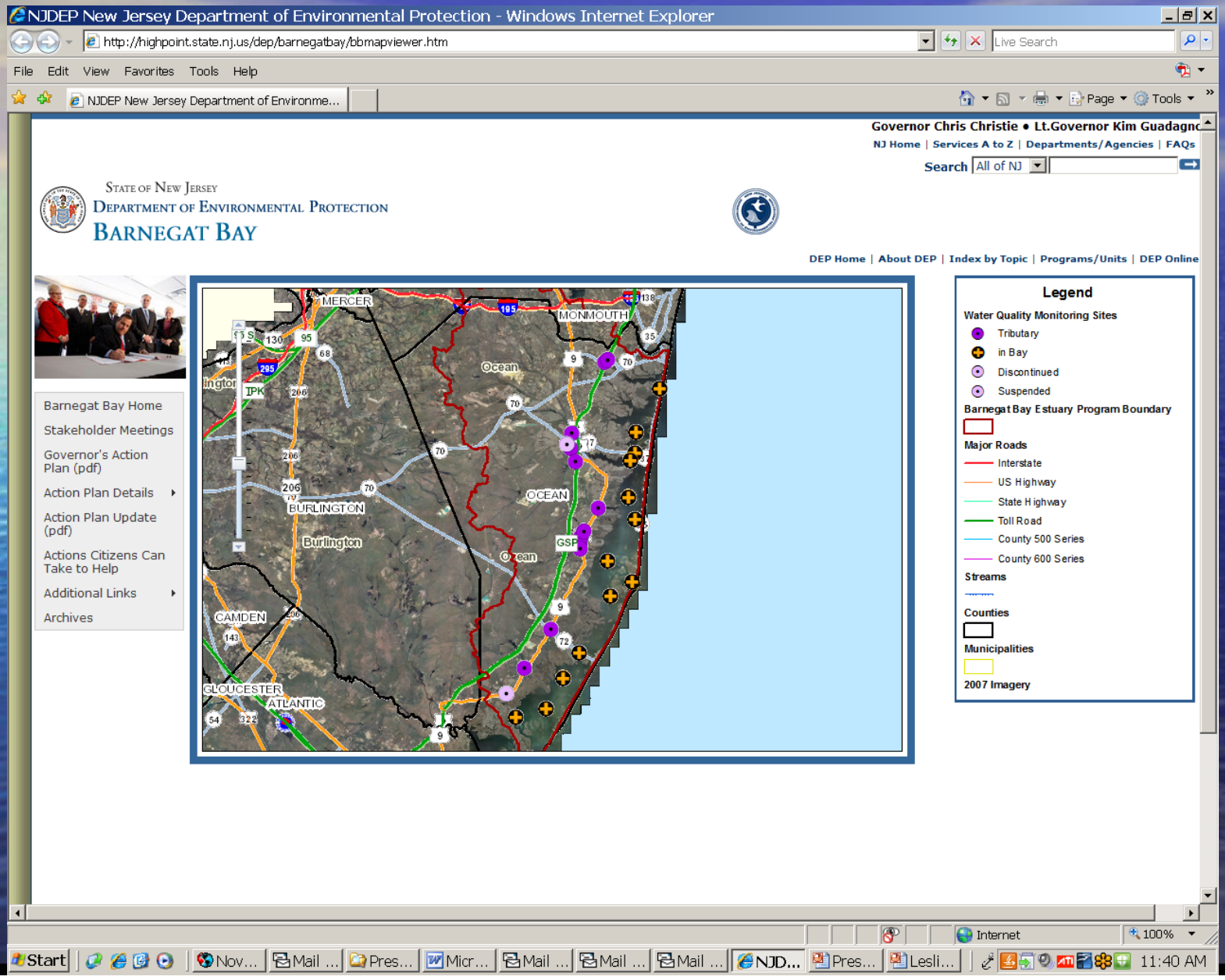
Barnegat Bay Interactive Map



New Features:

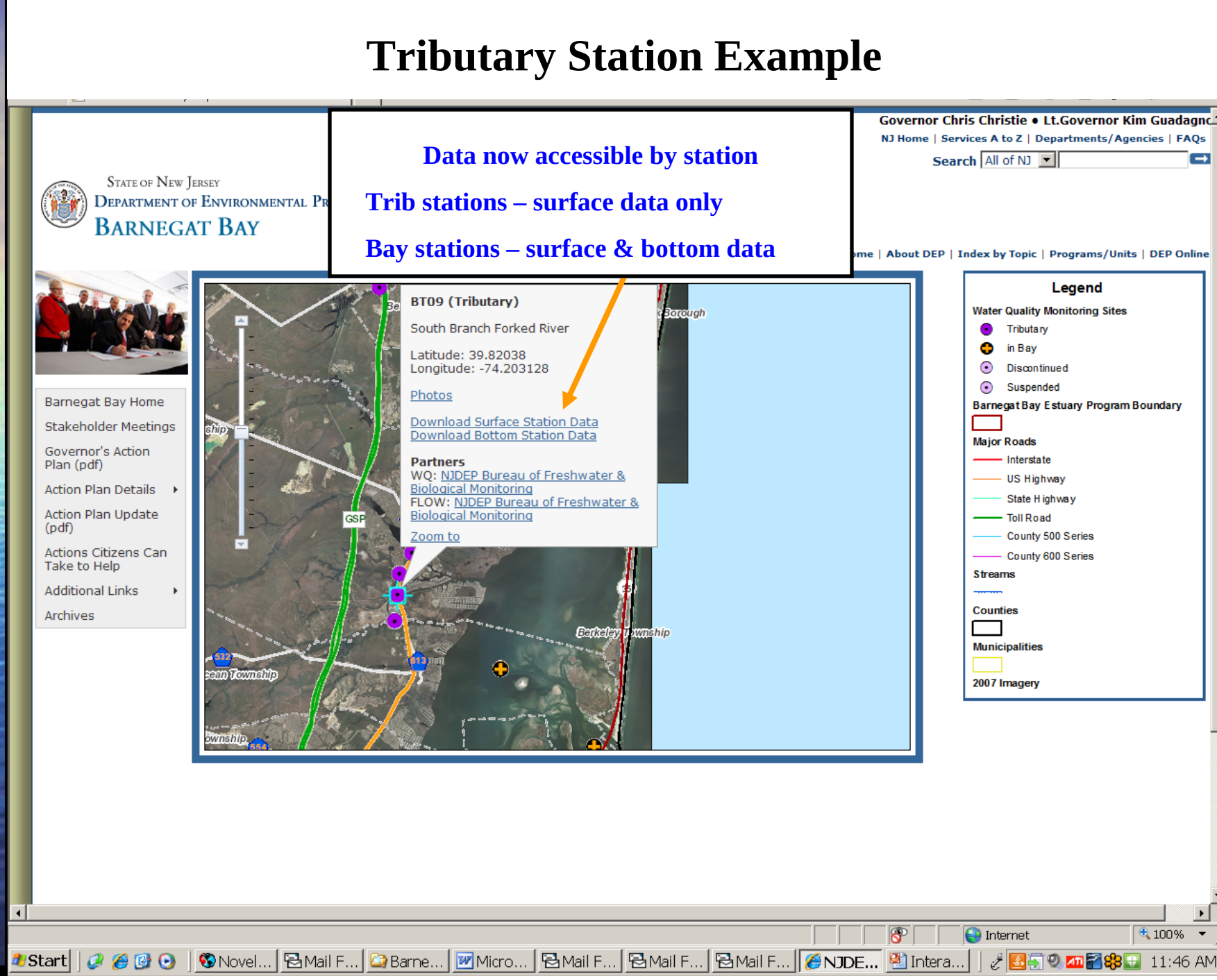
- Increased functionality
- Monitoring station modifications
- Direct access to data for each station

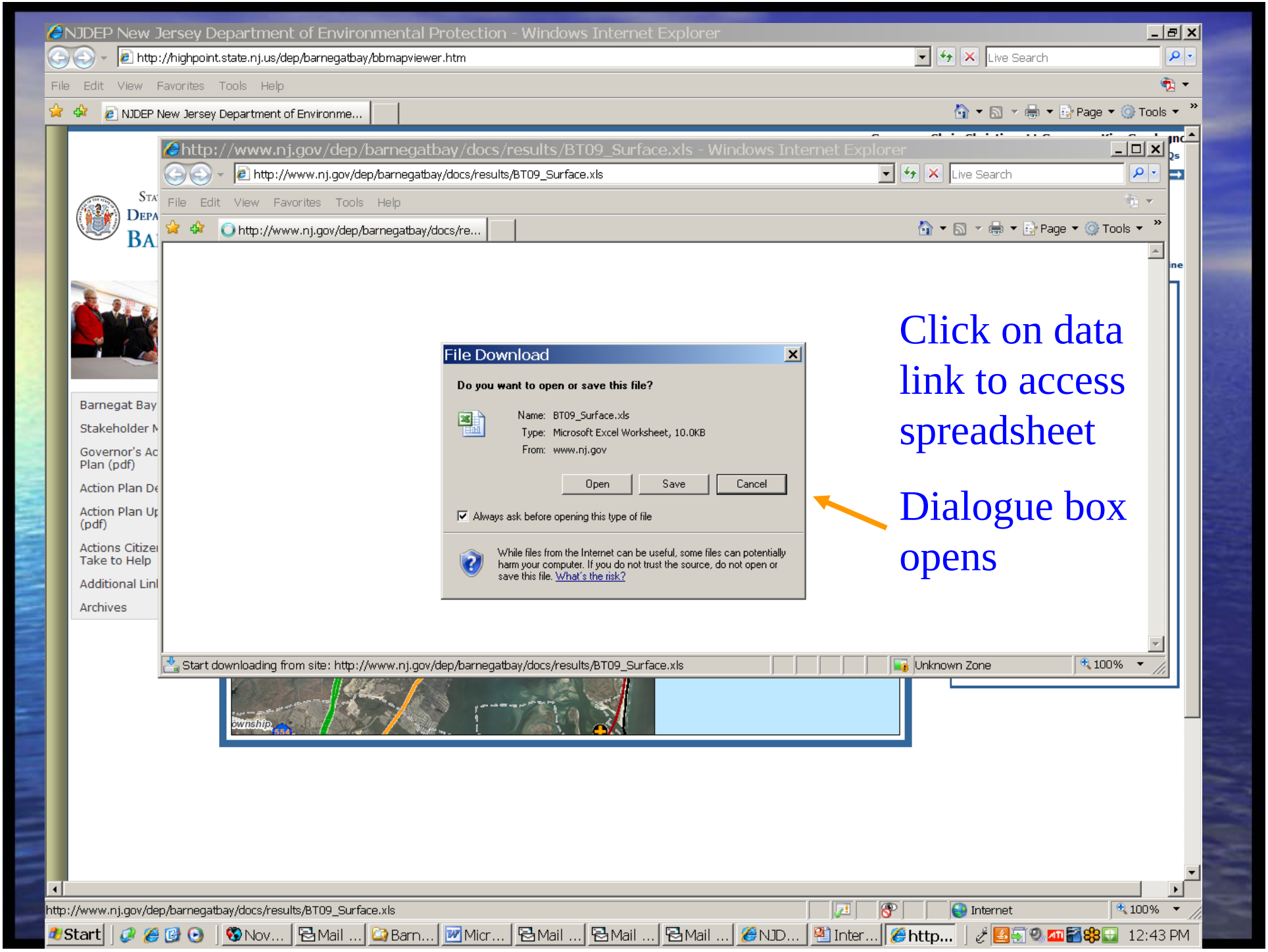
Tributary Station Example

Data now accessible by station

Trib stations – surface data only

Bay stations – surface & bottom data

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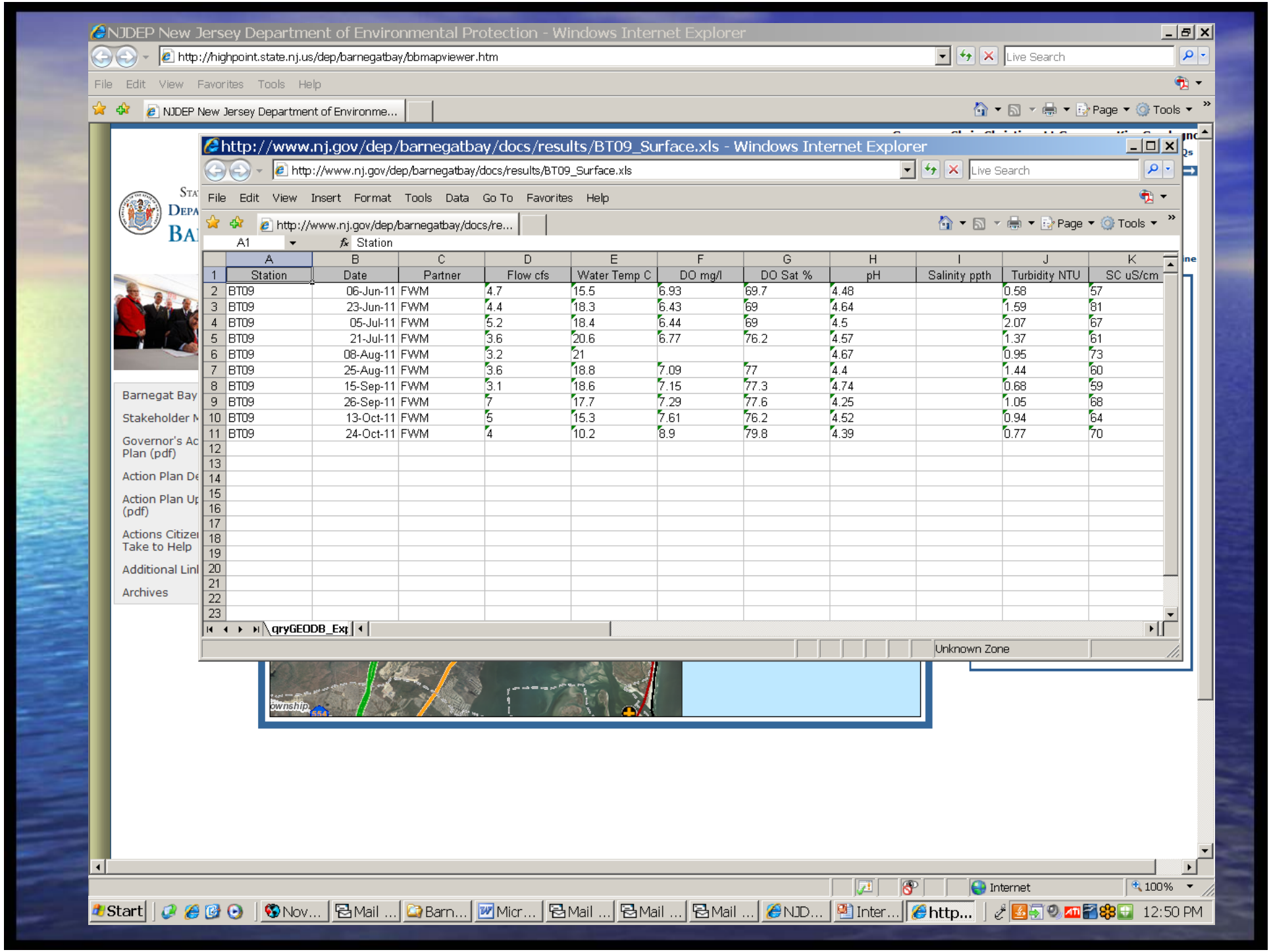
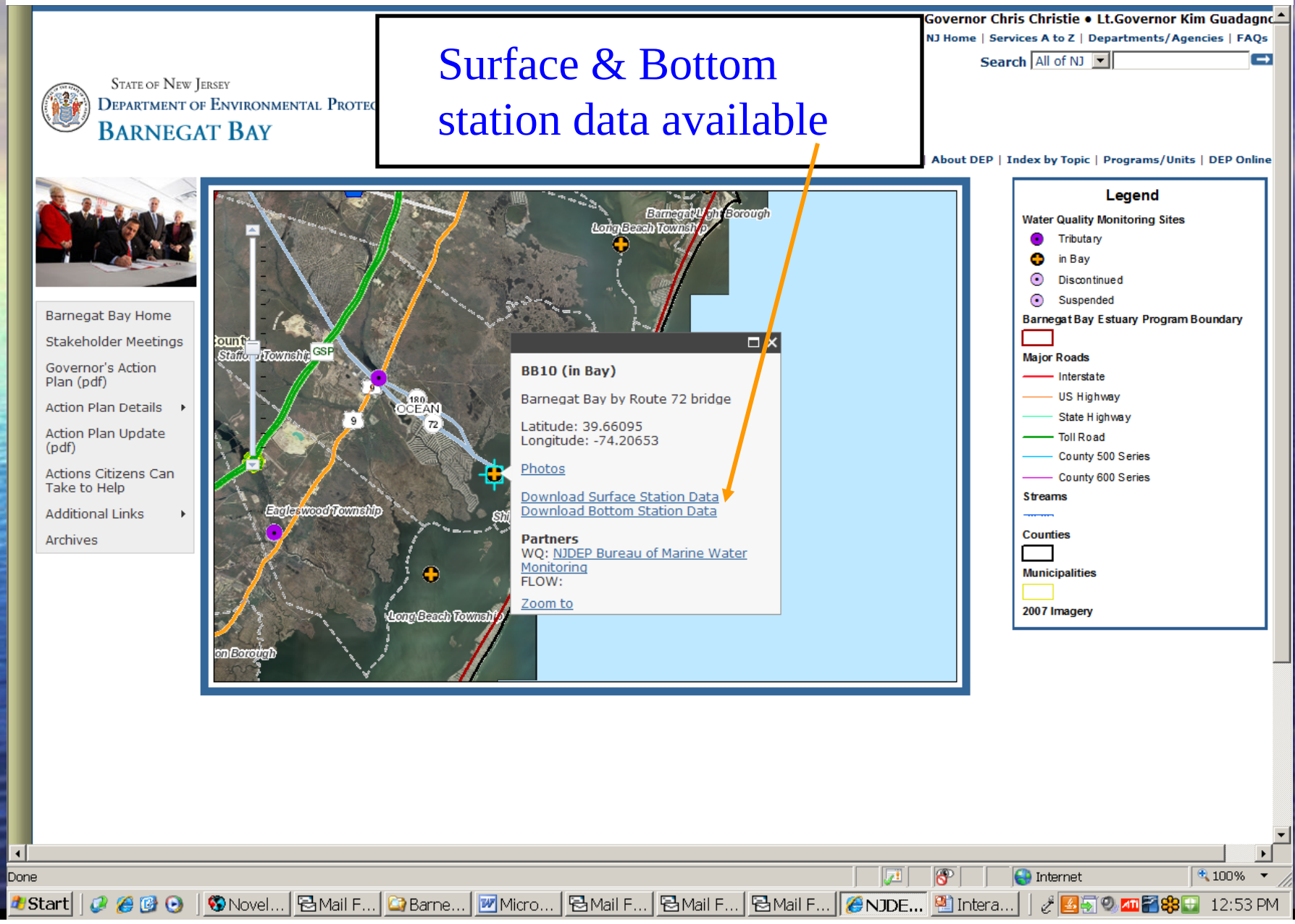
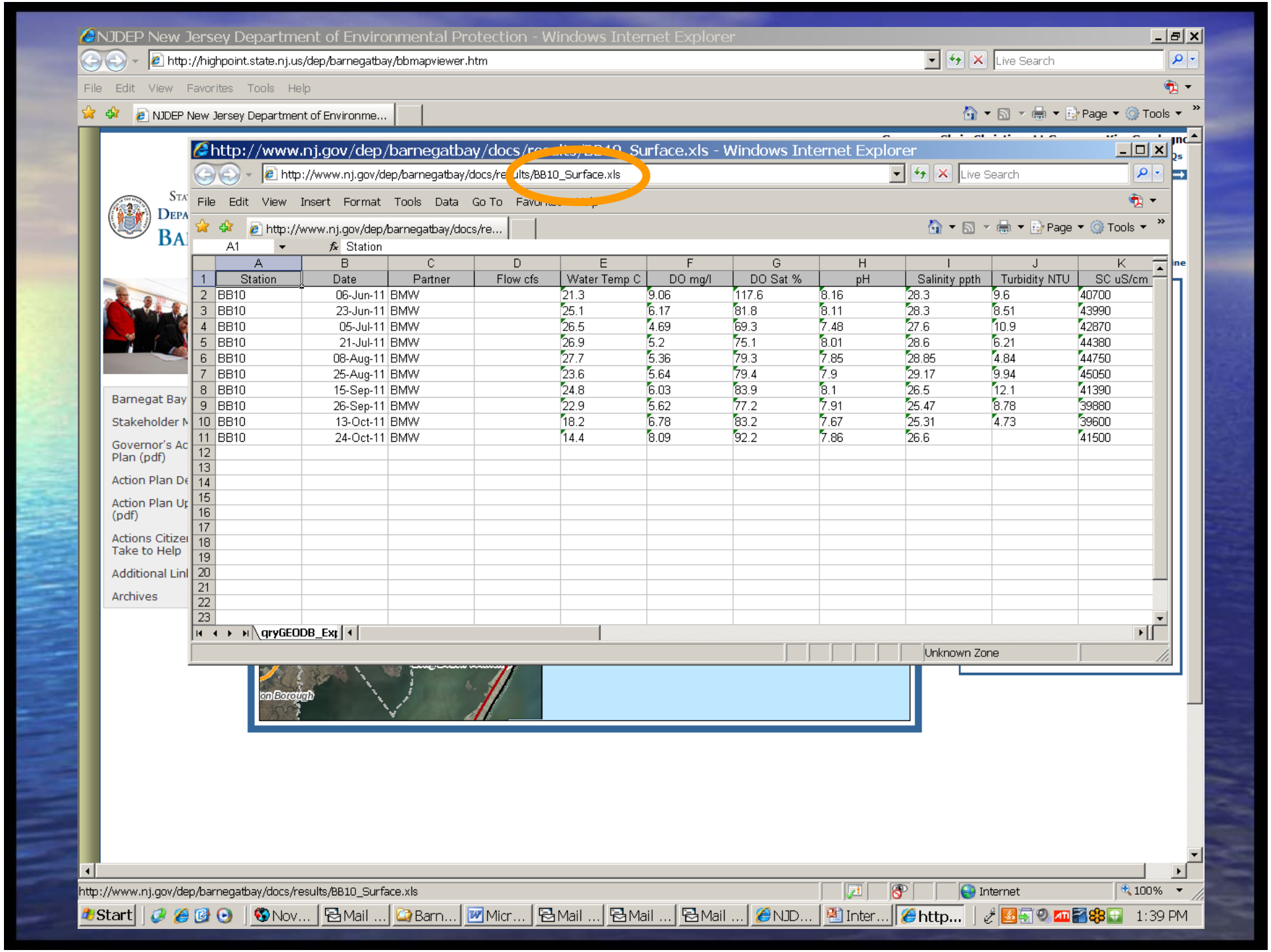


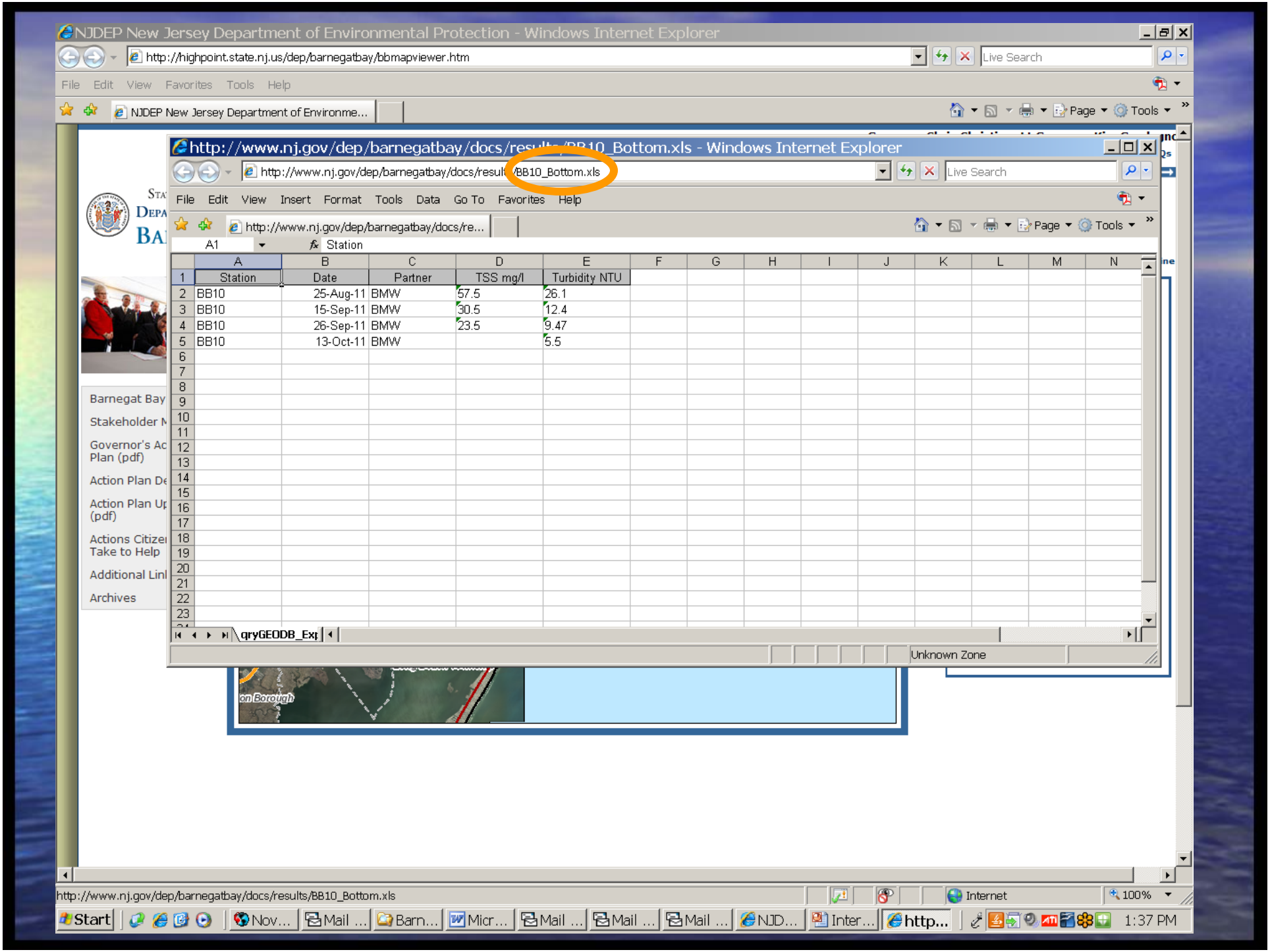
	A	B	C	D	E	F	G	H	I	J	K
1	Station	Date	Partner	Flow cfs	Water Temp C	DO mg/l	DO Sat %	pH	Salinity ppth	Turbidity NTU	SC uS/cm
2	BT09	06-Jun-11	FWM	4.7	15.5	6.93	69.7	4.48		0.58	57
3	BT09	23-Jun-11	FWM	4.4	18.3	6.43	69	4.64		1.59	81
4	BT09	05-Jul-11	FWM	5.2	18.4	6.44	69	4.5		2.07	67
5	BT09	21-Jul-11	FWM	3.6	20.6	6.77	76.2	4.57		1.37	61
6	BT09	08-Aug-11	FWM	3.2	21			4.67		0.95	73
7	BT09	25-Aug-11	FWM	3.6	18.8	7.09	77	4.4		1.44	60
8	BT09	15-Sep-11	FWM	3.1	18.6	7.15	77.3	4.74		0.68	59
9	BT09	26-Sep-11	FWM	7	17.7	7.29	77.6	4.25		1.05	68
10	BT09	13-Oct-11	FWM	5	15.3	7.61	76.2	4.52		0.94	64
11	BT09	24-Oct-11	FWM	4	10.2	8.9	79.8	4.39		0.77	70

Bay Station Example





Station	Date	Partner	Flow cfs	Water Temp C	DO mg/l	DO Sat %	pH	Salinity ppth	Turbidity NTU	SC uS/cm
BB10	06-Jun-11	BMW		21.3	9.06	117.6	8.16	28.3	9.6	40700
BB10	23-Jun-11	BMW		25.1	6.17	81.8	8.11	28.3	8.51	43990
BB10	05-Jul-11	BMW		26.5	4.69	69.3	7.48	27.6	10.9	42870
BB10	21-Jul-11	BMW		26.9	5.2	75.1	8.01	28.6	6.21	44380
BB10	08-Aug-11	BMW		27.7	5.36	79.3	7.85	28.85	4.84	44750
BB10	25-Aug-11	BMW		23.6	5.64	79.4	7.9	29.17	9.94	45050
BB10	15-Sep-11	BMW		24.8	6.03	83.9	8.1	26.5	12.1	41390
BB10	26-Sep-11	BMW		22.9	5.62	77.2	7.91	25.47	8.78	39880
BB10	13-Oct-11	BMW		18.2	6.78	83.2	7.67	25.31	4.73	39600
BB10	24-Oct-11	BMW		14.4	8.09	92.2	7.86	26.6		41500



Station	Date	Partner	TSS mg/l	Turbidity NTU
BB10	25-Aug-11	BMW	57.5	26.1
BB10	15-Sep-11	BMW	30.5	12.4
BB10	26-Sep-11	BMW	23.5	9.47
BB10	13-Oct-11	BMW		5.5

Other available station-specific information:

- **Name**
- **Location**
- **Latitude/Longitude**
- **Site Photos**
- **Partner(s) w/ links to website(s)**

Additional new functionality:

- **Zoom to site**