

**Auburn City Council
Regular Meeting
Thursday, July 14, 2022 5:00 P.M.
City Council Chambers
Memorial City Hall
24 South St.
Auburn, NY 13021**

Minutes

The meeting of the Auburn City Council was called to order at 5:00 p.m. from the City Council Chambers, 24 South St. Auburn, NY by Mayor Quill.

ROLL CALL – The City Clerk called the roll. Mayor Quill and Councilor Ginny Kent, Councilor Jimmy Giannettino, Councilor Terry Cuddy and Councilor Tim Locastro were all present.

The following City Staff was present for the meeting:

- City Manager, Jeff Dygert
- City Clerk, Chuck Mason
- Asst. Corporation Counsel, Nate Garland
- Police Chief, Jim Slayton
- Fire Chief, Mark Fritz
- City Engineer, William Lupien
- Director of Municipal Utilities, Seth Jensen
- Sgt. Greg Gilfus, Traffic Control Officer for APD

Pledge of Allegiance to the Flag – Mayor Quill led the Pledge of Allegiance.

Moment of Silent Prayer or Reflection – Mayor Quill asked for a moment of silent prayer.

Public Announcements –

Summer event calendar was mailed out to all city residents. Summer concerts and movies start this week at city parks and the new summer recreation program with CNY Sports began July 11, 2022. The clerk also announced upcoming events in the parks for the next week.

CEREMONIAL PRESENTATIONS – none.

Public to be heard: Mayor Quill asked the Clerk to read the public to be heard rules.

Kevin Sullivan spoke regarding a new business that he will be bringing to downtown Auburn for his woodworking business. He has signed a lease on a downtown retail space and advocates for the free parking downtown. The free parking downtown entered in to his decision to locate downtown.

Charlene Holmes Sullivan spoke to also discuss locating her business downtown with her husband Kevin Sullivan. She spoke about free parking downtown leading to them spending more time downtown and deciding to bring their business to a retail space downtown.

Approval of Meeting Minutes – none

Reports of City Officials

City Manager's Report –

- The new summer recreation program that was recently approved by City Council started this week. The attendance was great for the first week and the program will run for six more weeks this summer.

Reports from members of Council - none

Matters to Come Before Council

A. State Environmental Quality Review Act Resolutions (SEQR) - none

B. Ordinances – none

C. Local Laws – none

D. Resolutions – none

E. Staff or Vendor Presentations

- City of Auburn Drinking Water Source Protection Plan Draft presented by LaBella Associates and Behan Planning and Design. See attached.
- Lake Level Presentation - Seth Jensen, Director of Municipal Utilities. See attached.
- Parking Discussion - Greg Gilfus, Traffic Safety Officer and Stephanie DeVito from the Auburn Downtown BID. The on street parking program that offers 2 hours free was discussed. Both the positive and challenges of the program were discussed. The City Manager will continue working on the matter and the topic will be back before the Council at a future meeting.

TABLED ITEMS - none

OTHER BUSINESS –

Second Public to be Heard.

Auburn City Council Meeting, July 14, 2022

Walter Hang of Ithaca, NY representing his organization named Toxics Targeting. He addressed the Council with his thoughts regarding the City of Auburn Drinking Water Source Protection Plan presentation.

ADJOURNMENT: By unanimous vote the Council adjourned the meeting. The meeting was adjourned at 7:11 p.m..

Minutes submitted by: Chuck Mason, City Clerk

Presentation to the Auburn City Council

July 14, 2022



Department of
Environmental
Conservation



Department of
Health



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Drinking Water Source Protection Program (DWSP2)

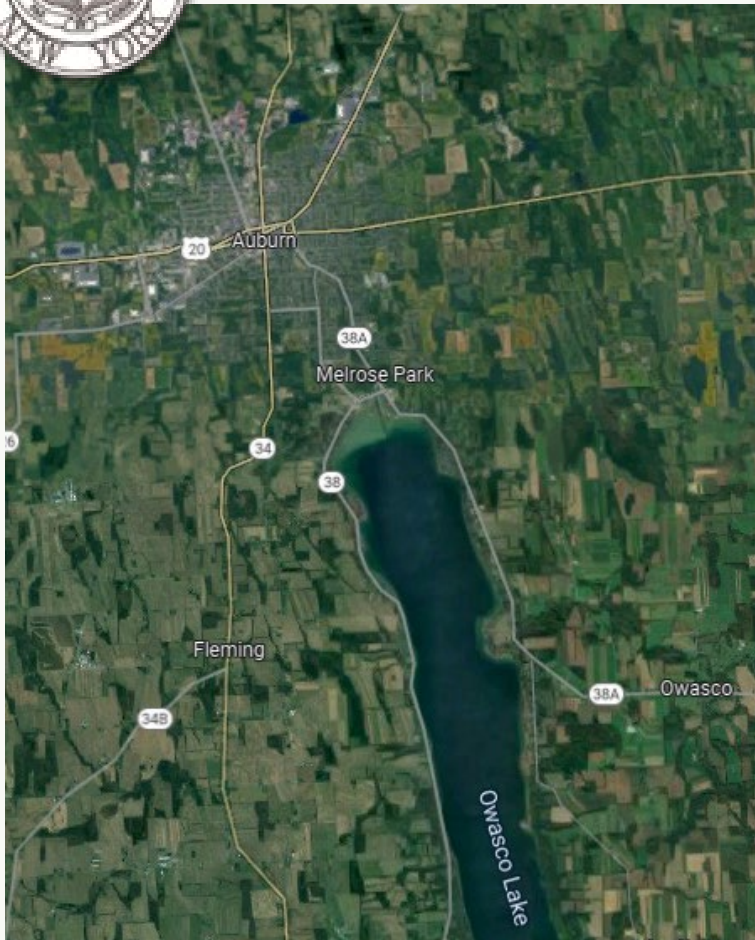
Going from Assessment ➔ Protection



A plan to preserve water quality that is currently good.



It's your plan!



DWSP2 will complement existing water quality initiatives like:

- **Owasco Lake Watershed Nine Element Plan**
- **Owasco Lake Watershed Rules & Regulations**
- **City of Auburn initiative to secure Total Maximum Daily Load (TMDL)**
- **NYS DEC Owasco Lake Harmful Algal Bloom (HAB) Action Plan**

DWSP2 Framework's Key Components

1. Stakeholder Group

- 1.1 Form a Stakeholder Group
- 1.2 Establish Goals and Formulate a Vision

2. Drinking Water Source Assessment

- 2.1 Develop an Overview of the Water System
- 2.2 Prepare a Drinking Water Source Protection Map
- 2.3 Create a Potential Contaminant Source Inventory

3. Protection and Implementation Strategies

- 3.1 Identify Protection and Management Methods
- 3.2 Develop an Implementation Timeline

4. Progression and Maintenance

- 4.1 Designate a Plan Management Team



COMMUNITY ADVISORY GROUP

Seth Jensen	City of Auburn Municipal Utilities
John West	City of Auburn Municipal Utilities
Timothy O'Brien	City of Auburn Municipal Utilities
Jimmy Giannettino	City of Auburn City Council
Adam Effler	Owasco Lake Watershed Management Council
Stephen Lynch	Cayuga County Planning & Economic Development
Michele Wunderlich	Cayuga County Planning & Economic Development
Ed Wagner	Town of Owasco Supervisor
Eileen O'Connor	Cayuga County Department of Health
Douglas Barnes	Tompkins County Department of Health

Consulting team led by LaBella Associates with Behan Planning and Design and other team members

VISION

Move Owasco lake into a healthier state to maintain clean drinking water with minimal treatment needed for the current and future residents and customers of the City of Auburn.

A series of supportive goals were also developed.

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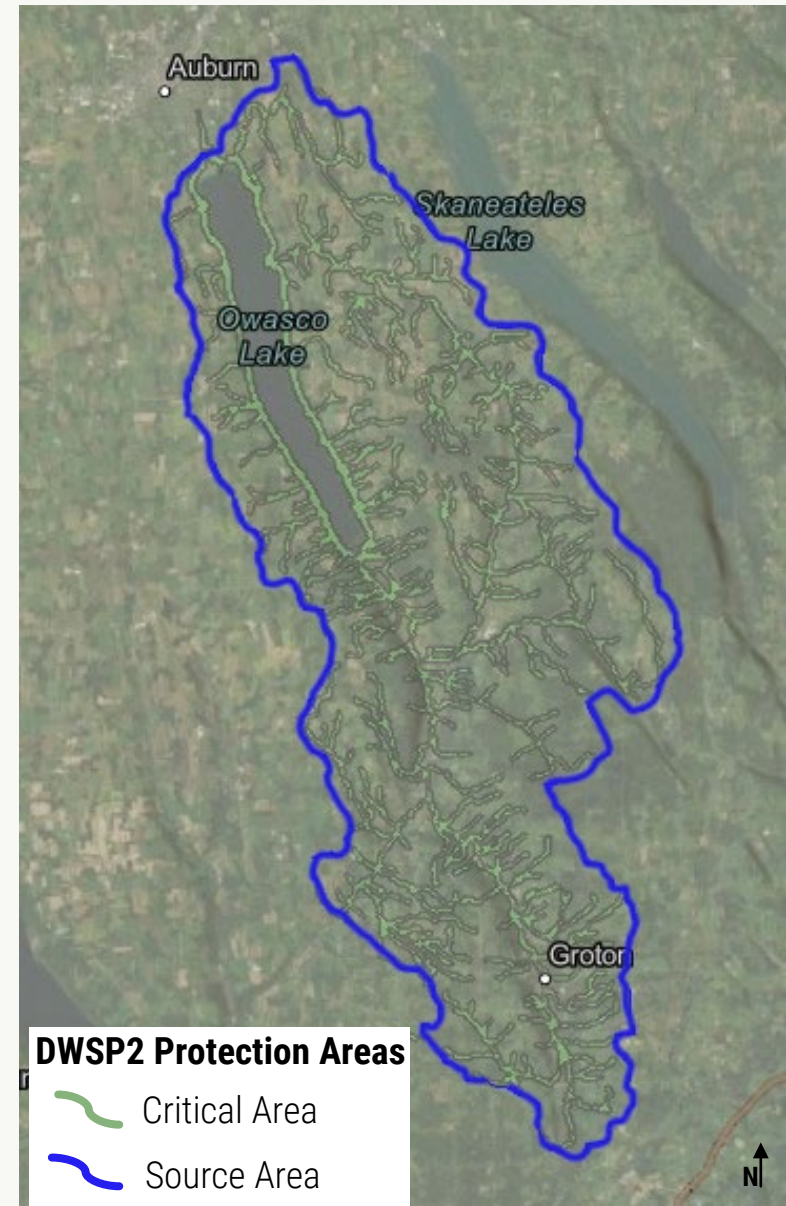
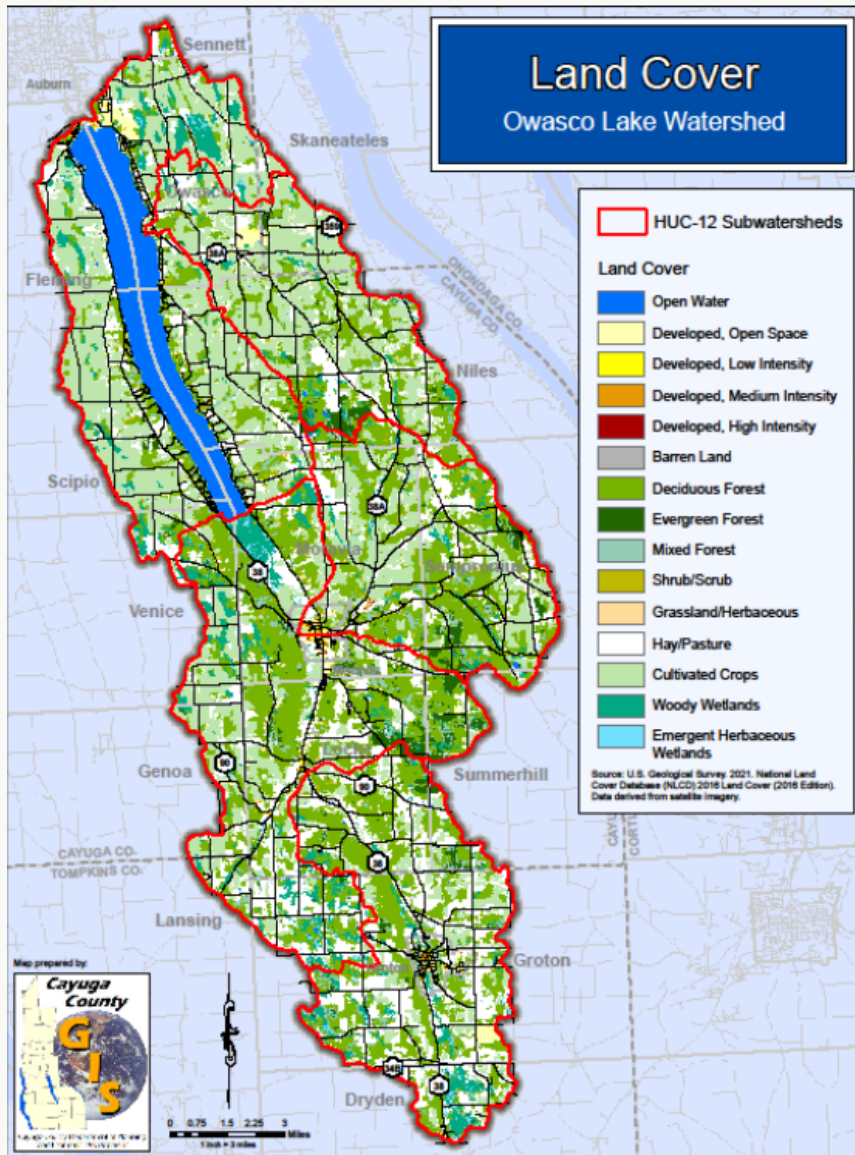
3. Protection and Implementation Strategies

- 3.1 Identify Protection and Management Methods
- 3.2 Develop an Implementation Timeline

4. Progression and Maintenance

- 4.1 Designate a Plan Management Team





SOURCE AREAS

All land and land uses in the watersheds and subwatersheds of Owasco Lake.

CRITICAL AREAS

Land along Owasco Lake shoreline & tributary buffers, including:

- **Developed residential and commercial land**
- **Open space and agricultural areas**
- **Roads**

DWSP2 Framework's Key Components

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PROTECTION & IMPLEMENTATION METHODS

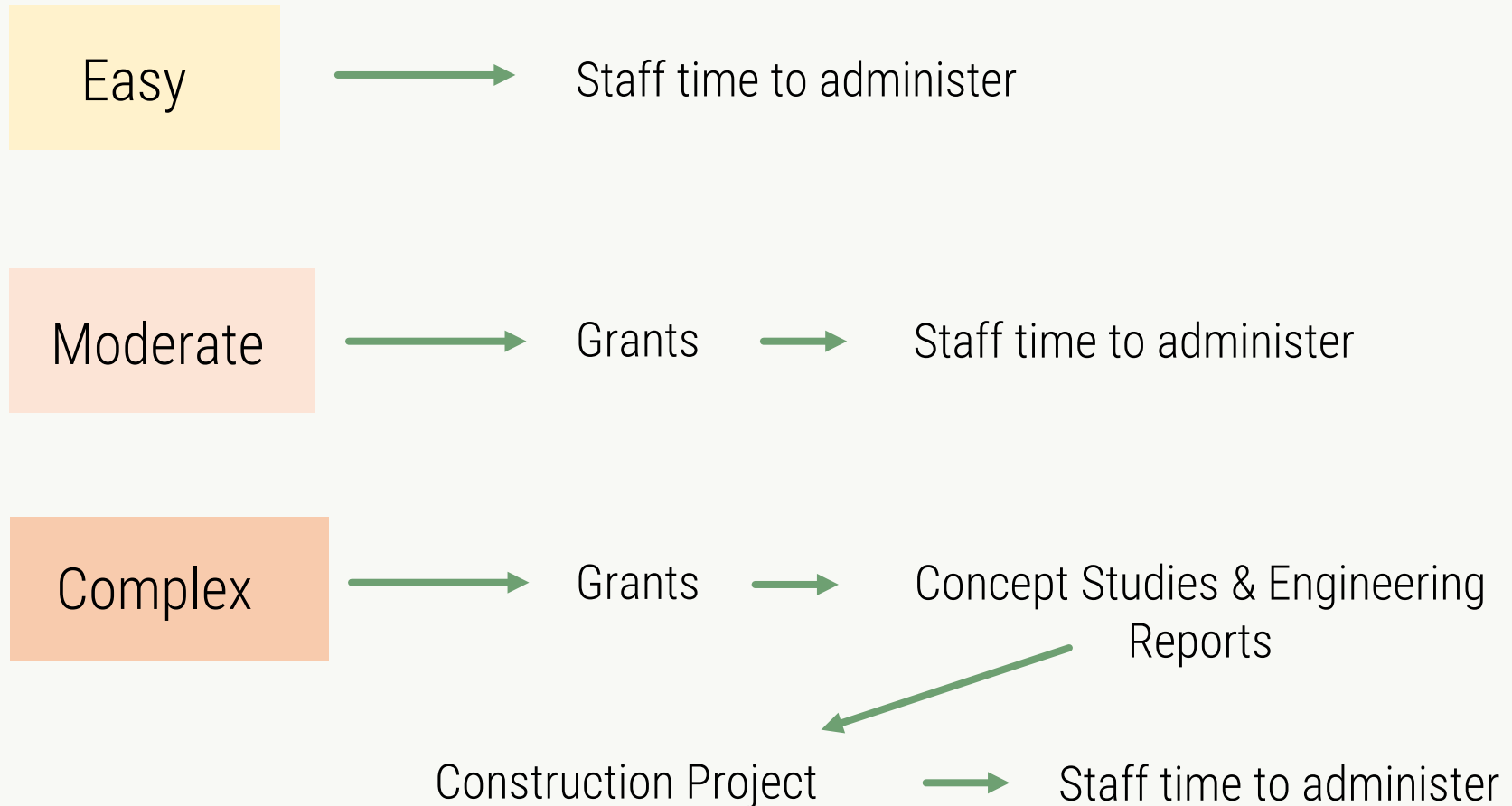
Category	Priority for Auburn's drinking water	Priority Issue	Geography	Targeted Potential Contaminant Source(s)	Objective Addressed	Protection Method and/or Management Method	Ease to Implement	Potential Cost	Potential Funding Sources (among others)	Project Leader and Partnerships Needed	Implementation Timing
Commercial & residential areas	Moderate	Developed land within critical areas (lakeshore and stream buffers)	Critical area	Fertilizer, pesticides, herbicides, sediment, oils and metals	Reduce fertilizer, pesticides, herbicides, sediment, oils and metals in surface water	Advance a collection of property management awareness initiatives including fertilizer, pesticide and herbicide management and measures to reduce erosion and sedimentation from fire roads, driveways and ditches, including setbacks from streams (education programs including City awareness campaign with water bills, partner with Cornell Cooperative Extension and nonprofits for delivery of educational program for schools, demonstration projects, community incentive projects).	Moderate	Time and staff to administer (\$5-15k/year/municipality)	Municipalities, other: NYS EFC Green Innovation Grant Program, National Fish and Wildlife Foundation/Wildlife Habitat Council Five Star and Urban Waters Restoration Grant Program	Lead - Owasco Lake Watershed Management Council, Partners - Owasco Watershed Lake Association, City, Municipalities, Cornell Cooperative Extension	Year 1 and on-going
	Low	Development in the watershed	Critical area & source area	Nutrients, chemicals, sediment and pathogens	Decrease potential for more nutrients and runoff	Develop and adopt a source water protection overlay ordinance in each municipality.	Moderate	Time and staff (around \$15-30k including legal review, SEQR and adoption per municipality)	Future grants supporting DWSP2 initiatives	Lead - Municipal government, Partners - County Planning	Years 2 - 5
	Low	Septic systems	Critical area & source area	Nutrients and pathogens	Limit nutrient and pathogen transfer into the lake	Permanently protect sensitive land along tributaries through conservation easements and similar measures.	Moderate	Acquisition & easements costs per appraisal/program	NYS DEC Water Quality Improvement Project (WQIP) Program, USDA NRCS Healthy Forests Reserve Program	Lead - Municipalities, Partners - landowners, County Planning, Owasco Lake Watershed Management Council	Years 3 - 5
						Incentivized voluntary upgrades to septic systems that do not meet current standards in all critical areas. Reduce the percentage of homeowner in-kind required. Incentivize installation of nutrient removal technology in critical areas.	Moderate	Approx. \$20,000 per upgrade	NYS EFC Septic System Replacement Program	Lead - Cayuga, Tompkins, Onondaga County Departments of Health, Partners - Municipalities	On-going
				Chemicals and pharmaceuticals		Track trends in emerging contaminants from septic systems and wastewater treatment plants.	Moderate	High level study to address NYS DOH regs (\$30k), implementation TBD	Future grants supporting DWSP2 initiatives	Lead - Municipalities, Partners - County Planning, Owasco Lake Watershed Management Council	Years 5 - 10
Agriculture	High	Reduce nutrient and sediment entering Dutch Hollow, Sucker & Veness Brooks & other northern area draining directly into the lake (HUC 12 of Owasco Lake and Dutch Hollow Brook)	Northern end of critical and source area	Nutrients, chemicals and sediment	Reduce nutrient loading, chemical and sediment transporting into the lake	Expand nutrient management planning, whole farm planning and implementation of best management practices (such as Agricultural Environmental Mgmt (AEM) programs and biofertilizers) tailored to the farm in partnership with farmland owners and operators. Expand collaboration with Soil & Water Conservation Districts and other specialists and build capacity to train staff who create partnerships with farmland owners and operators and implement best management practices.	Moderate	Time and staff to administer (\$100k +/year), per nutrient plan budget (\$28-\$30/acre to develop a plan through the AEM program).	NYS Soil and Water Conservation Committee Agricultural Nonpoint Source	Lead - Farmland owners, County Soil & Water Conservation Districts, Cornell Cooperative Extension, Partner - Municipalities	Northern subwatersheds - Years 1 - 5, Southern subwatersheds - Years 2 - 6
						Permanently protect sensitive land along tributaries through conservation easements and similar measures.	Moderate	Acquisition & easements costs per appraisal/program	USDA NRCS Agricultural Conservation Easement Program	Lead - Municipalities, Partner - Landowners, County Planning Departments, Owasco Lake Watershed Management Council	Northern subwatersheds - Years 1 - 5, Southern subwatersheds - Years 2 - 6
	Moderate	Reduce nutrient and sediment entering at the Owasco Inlet	Southern end of critical and source area			Increase vegetated buffers, riparian buffers on tributaries and increase use of cover crops and tillage management through cooperative projects with landowners/farm operators and tailored to the farm.	Moderate	Acquisition & easements costs per appraisal/program	NYS DAMNYS Soil and Water Conservation Committee Source Water Buffer Program	Lead - Municipalities, Partner - Landowners, County Planning, Owasco Lake Watershed Management Council	Northern subwatersheds - Years 1 - 5, Southern subwatersheds - Years 2 - 6
						Develop and adopt a source water protection overlay ordinance in each municipality.	Moderate	Time and staff (around \$15-30k including legal review, SEQR and adoption per municipality)	Future grants supporting DWSP2 initiatives	Lead - Municipal governments, Partners - County Planning	Northern subwatersheds - Years 1 - 5, Southern subwatersheds - Years 2 - 6
	Moderate	CAFOs, manure lagoon or conveyance failure	Critical area & source area	Potential nutrients, pathogens, antibiotics, hormones, chemicals, sulfates	Reduce sediment transporting and nutrient, pathogen, and chemical loading into the lake	Expand collaboration with Soil & Water Conservation Districts to implement Agricultural Environmental Mgmt (AEM) programs and related best management practices in partnership with farmland owners and operators. Implement fail safe measures such as high level alarms, pump controller with failure alert.	Easy	Time and staff to administer (less than \$5k/year)	NYS Soil and Water Conservation Committee Agricultural Nonpoint Source	Lead - Municipalities, Partner - County Soil & Water Conservation Districts	Years 2 - 5
Planning & Regulations	High	To ensure the overall environmental health of the water source	Critical area & source area	All	To make best use of planning efforts and regulatory tools available	Implement, when finalized, Owasco Lake Watershed Nine Element Plan.	Moderate	Variable, many recommendations	Variable, many recommendations	Variable, many recommendations	Immediate
						Implement, when finalized, Owasco Lake Watershed Rules & Regulations.	Moderate	Variable, many recommendations	Variable, many recommendations	Variable, many recommendations	Immediate

PROTECTION & IMPLEMENTATION METHODS, CONTINUED

CITY OF AUBURN

Category	Priority	Priority Issue	Geography	Targeted Potential Contaminant Source(s)	Objective Addressed	Protection Method and/or Management Method	Ease to Implement	Potential Cost	Potential Funding Sources (among others)	Project Leader and Partnerships Needed	Implementation Timing
Transportation - Roads, ditches & culverts	Moderate	Roadside ditches	Critical area	Nutrients and sediment	Reduce the amount of nutrients and sediment running into critical source water area	Identify priority subwatersheds/erosion-prone corridors near water intake. Stabilize and implement green infrastructure in ditches. Develop options to reduce peak flows and related erosion and sedimentation with enhanced stormwater management designs.	Moderate	Time and staff to administer a stormwater management plan (\$50-100k). Install cost TBD (\$ million), maintenance (~\$30k/year)	NYS EFC Green Innovation Grant Program, NYS DEC Non-Agricultural Nonpoint Source Planning Grant Program	Lead - Municipalities and Cayuga County Soil & Water, Partner- Owasco Watershed Lake Association, County Highway	On-going
	Low	Deicing chemicals	Critical area & source area	Salt (sodium chloride)	Reduce the amount of salt in critical and source water area	Create expanded partnership with state/county agencies, watershed communities and private partners for a holistic program to reduce salt usage, including BMPs like proper storage facilities (covered/concrete), cost-effective alternatives (anti-icing salt brine applications prior to storms), more efficient plows and post-storm assessments.	Moderate	Time and staff to administer, cost of signage materials (less than \$10k/year)		Lead - Municipal Highway Departments and engineers. Partners - NYS DOT, County Department of Public Works, watershed communities and private partners	Year 2 and on-going
							Complex	Convert roadside drainage over time to discourage ground water recharge of salty road runoff (\$ millions over time)	US EPA Urban Waters Small Grants Program, NYS EFC Green Innovation Grant Program		Years 5 - 10
							Complex	Upgrades of salting equipment to reduce salt (apply brine, etc) (+\$1 million)	NYS DEC WQIP Program - Other Projects		Years 3 - 5
							Moderate	Partnership with state/county agencies on BMP training			Year 2 and on-going
	Low	Accidental releases from highway corridors such as chemical/hazardous cargo	Critical area	Chemicals/petroleum products, milk, manure	Heightened awareness from emergency responders to spills in source water area	Explore potential enhanced preparedness for spill response with local/county/state responders, including amended Hazard Mitigation Plan and annual reminders for the location of critical source water areas.	Easy	Time and staff to create awareness/training plan (\$10k), and implement (\$2k annually)	DHSES Hazardous Materials Emergency Preparedness (HMEP) Grant Program	Lead - Municipalities, Partners - Cayuga County Emergency Management Office, Auburn Fire Department HazMat Team, NYS DEC, County and local responders	Year 1 and on-going
Trends and future threats	High	More frequent & intense storms creating increased runoff	Critical area & source area	Nutrients and sediment	Reduce surge of nutrients and sediments into lake, enhance groundwater recharge.	Prioritize vulnerable subwatershed areas and collaborate with landowners to develop a targeted plan which may include riparian, forested and vegetated buffers, storm water retention areas and other best management practices like conservation easements.	Moderate	Acquisition & easements costs per appraisal/program	NYS DEC Climate Smart Communities Grant Program, NYS DEC Trees for Tribes	Lead - Municipalities, Partner - Landowners, County Planning, Owasco Lake Watershed Management Council	Years 2 - 6
	Moderate	Increase in lake temperature due to climate change	Critical area	Harmful algal blooms (HABs) stimulant and some invasive species need warmer temperatures to survive	Manage temperature to prevent increased potential for HAB proliferation	Maximize shading for all tributaries using riparian buffers and tree planting programs.	Moderate	Variable per project cost (~\$5 - 50k), Recommended watershed wide budget ~\$500k/year	NYS DEC Trees for Tribes	Lead - Municipalities, Partner - County Soil & Water Conservation Districts	Years 3 - 5
						Maximize groundwater recharge across watersheds to increase percentage of water entering streams and lake as earth-cooled springs and baseflow (retention ponds, pools, basins).	Moderate	\$50 - 80k for feasibility/design study, \$250k/year for implementation projects	NYS DEC Climate Smart Communities Grant Program, NYS EFC Green Innovation Grant, NYS EFC Integrated Solutions Construction Grant Program, WQIP	Lead - Municipalities, Partner - Landowners, County Planning, Owasco Lake Watershed Management Council	Years 3 - 5
						Explore innovative strategies (such as in lake shading structures) over water intake pipe to cool the water.	Complex	Concept study (\$30k), Implementation TBD	NYSERDA Clean Energy Communities Program	Lead - City of Auburn, Partner - NYSEDA	Year 2 (study)
						Investigate the benefits and costs of moving the municipal water intake to a deeper/cooler location, after studying the efficacy and water quality parameters of an extension.	Moderate	Investigative study (\$50-150k), Capital cost of moving intake (cost estimate TBD)	NYS EFC Water Infrastructure Improvement Act, NYS EFC Integrated Solutions Construction Grant Program	Lead - City of Auburn	Year 1
	Moderate	Invasive species	Critical area	Nutrients (eutrophication), threats to biodiversity, erosion and sediment	Reduce invasive species in critical areas	Continue prevention, monitoring and appropriate treatment of invasive species and support expanded lake/watershed stewardship activities.	Moderate	City time and staff to monitor \$0/year, Add a seasonal lake steward (\$10k), treatment TBD (ongoing by others)	NYS DEC Invasive Species Grant Program, Finger Lakes Lake Ontario Watershed Protection Alliance	Lead - NYS DEC, Partners - Finger Lakes Partnership for Regional Invasive Species Management, Cayuga County Planning Department, Owasco Lake Watershed Management Council, Municipalities	On-going
	Low	Emerging contaminants	Critical area & source area	Unknown	Finding and addressing emerging contaminants	Determine recommended additional testing protocols with intermunicipal collaboration to identify potential future threats. Respond appropriately with mitigation activities, thru septic systems and wastewater treatment plants.	Moderate	Time and staff to administer (less than \$5k/year)		Lead - Municipalities, Partner - Owasco Lake Watershed Management Council	Years 5 - 10

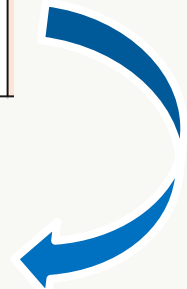
IMPLEMENTATION STEPS



PROTECTION & IMPLEMENTATION METHODS - EXAMPLE

Category	Priority for Auburn's drinking water	Priority Issue	Geography	Targeted Potential Contaminant Source(s)	Objective Addressed	Protection Method and/or Management Method
Trends and future threats	Moderate	Invasive species	Critical area	Nutrients (eutrophication), threats to biodiversity, erosion and sediment	Reduce invasive species in critical areas	Continue prevention, monitoring and appropriate treatment of invasive species and support expanded lake/watershed stewardship activities.

Ease to Implement	Potential Cost	Potential Funding Sources (among others)	Project Leader and Partnerships Needed	Implementation Timing
Moderate	City time and staff to monitor \$0/year, Add a seasonal lake steward (\$10k), treatment TBD (ongoing by others)	NYS DEC Invasive Species Grant Program, Finger Lakes Lake Ontario Watershed Protection Alliance	Lakes Partnership for Regional Invasive Species Management, Cayuga County Planning Department, Owasco Lake Watershed Management	On-going



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1. Stakeholder Group

- 1.1 Form a Stakeholder Group ✓
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2. Drinking Water Source Assessment

- 2.1 Develop an Overview of the Water System ✓
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3. Protection and Implementation Strategies

- 3.1 Identify Protection and Management Methods ✓
- 3.2 Develop an Implementation Timeline ✓

4. Progression and Maintenance

- 4.1 Designate a Plan Management Team



RECOMMENDED CITY OF AUBURN PLAN MANAGEMENT TEAM

Seth Jensen, City of Auburn Municipal Utilities

City planner TBA, City of Auburn

Adam Effler, Owasco Lake Watershed Management Council

Councilor Giannettino, City of Auburn liaison, as needed

NEXT STEPS

- Review the input from this meeting and prepare a full draft plan.
- Next Advisory Committee meeting for feedback on draft plan.
 - Review of plan by State for completeness only.
 - Final plan approved and recommended to City by Advisory Committee.
- City Council is asked to endorse the plan.
- Plan is then ready to be implemented by Plan Management Team. Approved plans are more eligible for funding assistance.

A scenic view of a river or lake with lush green trees and bushes in the background and foreground. The water is dark blue with gentle ripples. A white, rounded rectangular box is overlaid on the left side of the image, containing the text "Thank you. Questions?".

Thank you. Questions?

City of Auburn DWSP2 Table 3.1 Identify Protection and Management & Table 3.2 Implementation Methods											
Category	Priority for Auburn's drinking water	Priority Issue	Geography	Targeted Potential Contaminant Source(s)	Objective Addressed	Protection Method and/or Management Method	Ease to Implement	Potential Cost	Potential Funding Sources (among others)	Project Leader and Partnerships Needed	Implementation Timing
Commercial & residential areas	Moderate	Developed land within critical areas (lakeshore and stream buffers)	Critical area	Fertilizer, pesticides, herbicides, sediment, oils and metals	Reduce fertilizer, pesticides, herbicides, sediment, oils and metals in surface water	Advance a collection of property management awareness initiatives including fertilizer, pesticide and herbicide management and meaures to reduce erosion and sedimentation from fire roads, driveways and ditches, including setbacks from streams (education programs including City awareness campaign with water bills, partner with Cornell Cooperative Extension and nonprofits for delivery of educational program for schools, demonstration projects, community incentive projects).	Moderate	Time and staff to administer (\$5-15k/year/municipality)	Municipalities, other: NYS EFC Green Innovation Grant Program, National Fish and Wildlife Foundation/Wildlife Habitat Council Five Star and Urban Waters Restoration Grant Program	Lead - Owasco Lake Watershed Management Council, Partners - Owasco Watershed Lake Association, City, Municipalities, Cornell Cooperative Extension	Year 1 and on-going
	Low	Development in the watershed	Critical area & source area	Nutrients, chemicals, sediment and pathogens	Decrease potential for more nutrients and runoff	Develop and adopt a source water protection overlay ordinance in each municipality.	Moderate	Time and staff (around \$15-30k including legal review, SEQR and adoption per municipality)	Future grants supporting DWSP2 initiatives	Lead - Municipal government, Partners - County Planning	Years 2 - 5
						Permanently protect sensitive land along tributaries through consevation easements and similar measures.	Moderate	Acquisition & easements costs per appraisal/program	NYS DEC Water Quality Improvement Project (WQIP) Program, USDA NRCS Healthy Forests Reserve Program	Lead - Municipalities, Partners - landowners, County Planning, Owasco Lake Watershed Management Council	Years 3 - 5
	Low	Septic systems	Critical area & source area	Nutrients and pathogens	Limit nutrient and pathogen transfer into the lake	Incentivized voluntary upgrades to septic systems that do not meet current standards in all critical areas. Reduce the percentage of homeowner in-kind required. Incentivize installation of nutrient removal technology in critical areas.	Moderate	Approx. \$20,000 per upgrade	NYS EFC Septic System Replacement Program	Lead - Cayuga, Tompkins, Onondaga County Departments of Health, Partners - Municipalities	On-going
				Chemicals and pharmaceuticals		Track trends in emerging contaminants from septic systems and wastewater treatment plants.	Moderate	High level study to address NYS DOH regs (\$30k), implementation TBD	Future grants supporting DWSP2 initiatives	Lead - Municipalities, Partners - County Planning, Owasco Lake Watershed Management Council	Years 5 - 10
	Agriculture	High	Reduce nutrient and sediment entering Dutch Hollow, Sucker & Veness Brooks & other northern area draining directly into the lake (HUC 12 of Owasco Lake and Dutch Hollow Brook)	Northern end of critical and source area	Nutrients, chemicals and sediment	Reduce nutrient loading, chemical and sediment transporting into the lake	Expand nutrient management planning, whole farm planning and implementation of best management practices (such as Agricultural Environmental Mgmt (AEM) programs and biofertilizers) tailored to the farm in partnership with farmland owners and operators. Expand collaboration with Soil & Water Conservation Districts and other specialists and build capacity to train staff who create partnerships with farmland owners and operators and implement best management practices.	Moderate	Time and staff to administer (\$100k +/-year), per nutrient plan budget (\$28-\$30/acre to develop a plan through the AEM program).	NYS Soil and Water Conservation Committee Agricultural Nonpoint Source	Lead - Farmland owners, County Soil & Water Conservation Districts, Cornell Cooperative Extension, Partner - Municipalities
Permanently protect sensitive land along tributaries through consevation easements and similar measures.							Moderate	Acquisition & easements costs per appraisal/program	USDA NRCS Agricultural Conservation Easement Program	Lead - Municipalities, Partner - Landowners, County Planning Departments, Owasco Lake Watershed Management Council	Northern subwatersheds - Years 1 - 5, Southern subwatersheds - Years 2 - 6
Moderate		Reduce nutrient and sediment entering at the Owasco Inlet	Southern end of critical and source area	Increase vegetated buffers, riparian buffers on tributaries and increase use of cover crops and tillage management though cooperative projects with landowners/farm operators and tailored to the farm.			Moderate	Acquisition & easements costs per appraisal/program	NYS DAM/NYS Soil and Water Conservation Committee Source Water Buffer Program	Lead - Municipalities, Partner - Landowners, County Planning, Owasco Lake Watershed Management Council	Northern subwatersheds - Years 1 - 5, Southern subwatersheds - Years 2 - 6
				Develop and adopt a source water protection overlay ordinance in each municipality.			Moderate	Time and staff (around \$15-30k including legal review, SEQR and adoption per municipality)	Future grants supporting DWSP2 initiatives	Lead - Municipal governments, Partners - County Planning	Northern subwatersheds - Years 1 - 5, Southern subwatersheds - Years 2 - 6
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Planning & Regulations	High	To ensure the overall environmental health of the water source	Critical area & source area	All	To make best use of planning efforts and regulatory tools available	Implement, when finalized, Owasco Lake Watershed Nine Element Plan.	Moderate	Variable, many recommendations	Variable, many recommendations	Variable, many recommendations	Immediate
						Implement, when finalized, Owasco Lake Watershed Rules & Regulations.	Moderate	Variable, many recommendations	Variable, many recommendations	Variable, many recommendations	Immediate

City of Auburn DWSP2 Table 3.1 Identify Protection and Management & Table 3.2 Implementation Methods											
Category	Priority	Priority Issue	Geography	Targeted Potential Contaminant Source(s)	Objective Addressed	Protection Method and/or Management Method	Ease to Implement	Potential Cost	Potential Funding Sources (among others)	Project Leader and Partnerships Needed	Implementation Timing
Transportation - Roads, ditches & culverts	Moderate	Roadside ditches	Critical area	Nutrients and sediment	Reduce the amount of nutrients and sediment running into critical source water area	Identify priority subwatersheds/erosion-prone corridors near water intake. Stabilize and implement green infrastructure in ditches. Develop options to reduce peak flows and related erosion and sedimentation with enhanced stormwater management designs.	Moderate	Time and staff to administer a stormwater management plan (\$50-100k), Install cost TBD (\$ million), maintenance (~\$30k/year)	NYS EFC Green Innovation Grant Program, NYS DEC Non-Agricultural Nonpoint Source Planning Grant Program	Lead - Municipalities and Cayuga County Soil & Water, Partner- Owasco Watershed Lake Association, County Highway	On-going
	Low	Deicing chemicals	Critical area & source area	Salt (sodium chloride)	Reduce the amount of salt in critical and source water area	Create expanded partnership with state/county agencies, watershed communities and private partners for a holistic program to reduce salt usage, including BMPs like proper storage facilities (covered/concrete), cost-effective alternatives (anti-icing salt brine applications prior to storms), more efficient plows and post-storm assessments.	Moderate	Time and staff to administer, cost of signage materials (less than \$10k/year)		Lead - Municipal Highway Departments and engineers. Partners - NYS DOT, County Department of Public Works, watershed communities and private partners	Year 2 and on-going
							Complex	Convert roadside drainage over time to discourage ground water recharge of salty road runoff (\$ millions over time)	US EPA Urban Waters Small Grants Program, NYS EFC Green Innovation Grant Program		Years 5 - 10
							Complex	Upgrades of salting equipment to reduce salt (apply brine, etc) (+\$1 million)	NYS DEC WQIP Program - Other Projects		Years 3 - 5
							Moderate	Partnership with state/county agencies on BMP training			Year 2 and on-going
	Low	Accidental releases from highway corridors such as chemical/hazardous cargo	Critical area	Chemicals/petroluem products, milk, manure	Heightened awareness from emergency responders to spills in source water area	Explore potential enhanced preparedness for spill response with local/county/state responders, including amended Hazard Mitigation Plan and annual reminders for the location of critical source water areas.	Easy	Time and staff to create awareness/training plan (\$10k), and implement (\$2k annually)	DHSES Hazardous Materials Emergency Preparedness (HMEP) Grant Program	Lead - Municipalities, Partners - Cayuga County Emergency Management Office, Auburn Fire Department HazMat Team, NYS DEC, County and local responders	Year 1 and on-going
Trends and future threats	High	More frequent & intense storms creating increased runoff	Critical area & source area	Nutrients and sediment	Reduce surge of nutrients and sediments into lake, enhance groundwater recharge.	Prioritize vulnerable subwatershed areas and collaborate with landowners to develop a targeted plan which may include riparian, forested and vegetated buffers, storm water retention areas and other best management practices like conservation easements.	Moderate	Acquisition & easements costs per appraisal/program	NYS DEC Climate Smart Communities Grant Program, NYS DEC Trees for Tribs	Lead - Municipalities, Partner - Landowners, County Planning, Owasco Lake Watershed Management Council	Years 2 - 6
	Moderate	Increase in lake temperature due to climate change	Critical area	Harmful algal blooms (HABs) stimulant and some invasive species need warmer temperatures to survive	Manage temperature to prevent increased potential for HAB proliferation	Maximize shading for all tributaries using riparian buffers and tree planting programs.	Moderate	Variable per project cost (~\$5 - 50k), Recommended watershed wide budget ~\$500k/year	NYS DEC Trees for Tribs	Lead - Municipalities, Partner - County Soil & Water Conservation Districts	Years 3 - 5
						Maximize groundwater recharge across watersheds to increase percentage of water entering streams and lake as earth-cooled springs and baseflow (retention ponds, pools, basins).	Moderate	\$50 - 80k for feasibility/design study, \$250k/year for implementation projects	NYS DEC Climate Smart Communities Grant Program, NYS EFC Green Innovation Grant, NYS EFC Integrated Solutions Construction Grant Program, WQIP	Lead - Municipalities, Partner - Landowners, County Planning, Owasco Lake Watershed Management Council	Years 3 - 5
						Explore innovative strategies (such as in lake shading structures) over water intake pipe to cool the water.	Complex	Concept study (\$30k), Implementation TBD	NYSERDA Clean Energy Communities Program	Lead - City of Auburn, Partner - NYSERDA	Year 2 (study)
						Investigate the benefits and costs of moving the municipal water intake to a deeper/cooler location, after studing the efficacy and water quality parameters of an extension.	Moderate	Investigative study (\$50-150k), Capital cost of moving intake (cost estimate TBD)	NYS EFC Water Infrastructure Improvement Act, NYS EFC Integrated Solutions Construction Grant Program	Lead - City of Auburn	Year 1
	Moderate	Invasive species	Critical area	Nutrients (eutrophication), threats to biodiversity, erosion and sediment	Reduce invasive species in critical areas	Continue prevention, monitoring and appropriate treatment of invasive species and support expanded lake/watershed stewardship activities.	Moderate	City time and staff to monitor \$0/year, Add a seasonal lake steward (\$10k), treatment TBD (ongoing by others)	NYS DEC Invasive Species Grant Program, Finger Lakes Lake Ontario Watershed Protection Alliance	Lead - NYS DEC, Partners - Finger Lakes Partnership for Regional Invasive Species Management, Cayuga County Planning Department, Owasco Lake Watershed Management Council, Municipalities	On-going
	Low	Emerging contaminants	Critical area & source area	Unknown	Finding and addressing emerging contaminants	Determine recommended additional testing protocols with intermunicipal collaboration to identify potential future threats. Respond appropriately with mitigation activities, thru septic systems and wastewater treatment plants.	Moderate	Time and staff to administer (less than \$5k/year)		Lead - Municipalities, Partner - Owasco Lake Watershed Management Council	Years 5 -10

City of Auburn DWSP2 Vision & Goals

Vision Statement

Move Owasco lake into a healthier state to maintain clean drinking water with minimal treatment needed for the current and future residents and customers of the City of Auburn.

Goals

1. Increase watershed-wide community awareness on how their actions affect the watershed.
2. Protect the watershed through a plan with resiliency and a proactive management and infrastructure approach to climate change (thermal, rainfall patterns, other).
3. Consider efficacy of extending the City's intake pipe to access higher-quality lake source water.
4. Reduce nutrient loading and sediment transporting into the lake (building on the 9 Element Plan goals, etc.) since this is understood to reduce Harmful Algal Bloom (HAB) occurrences.
5. Consider the proposed Owasco Lake Watershed Rules & Regulations Update, 9 Element Plan, invasive species, and Harmful Algal Bloom Action Plan findings and recommendations to inform and compliment the DWSP2.
6. Plan for the future, by testing for pesticides and chemicals, finding and addressing emerging contaminants, monitoring invasive species, as well as any other measures needed to anticipate future threats.
7. Discover scalable cost structures, grant opportunities, and other strategies to address funding gaps for source protection.
8. Provide a host of lake ecosystem benefits for all communities surrounding Owasco lake by helping improve the lake quality.
9. Identify discrete protection strategies focused on water supply security for the City of Auburn.

Owasco Lake Elevation and River Flow Management



CITY OF AUBURN
DEPARTMENT OF MUNICIPAL UTILITIES
SETH N. JENSEN, PE

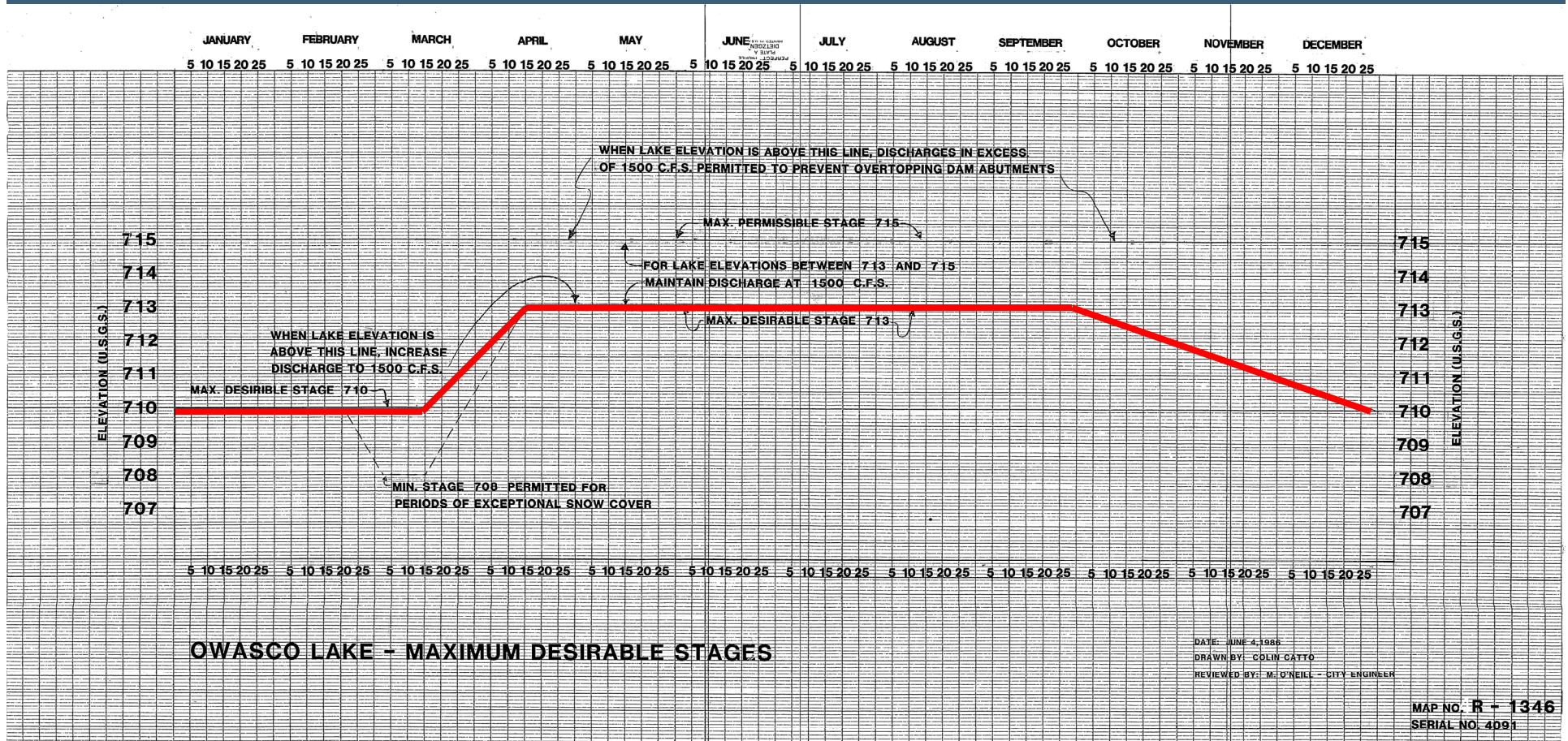
Poll?

Is the normal
summer elevation of
Owasco Lake... too
high, too low, just
right, no comment?

Our Goal

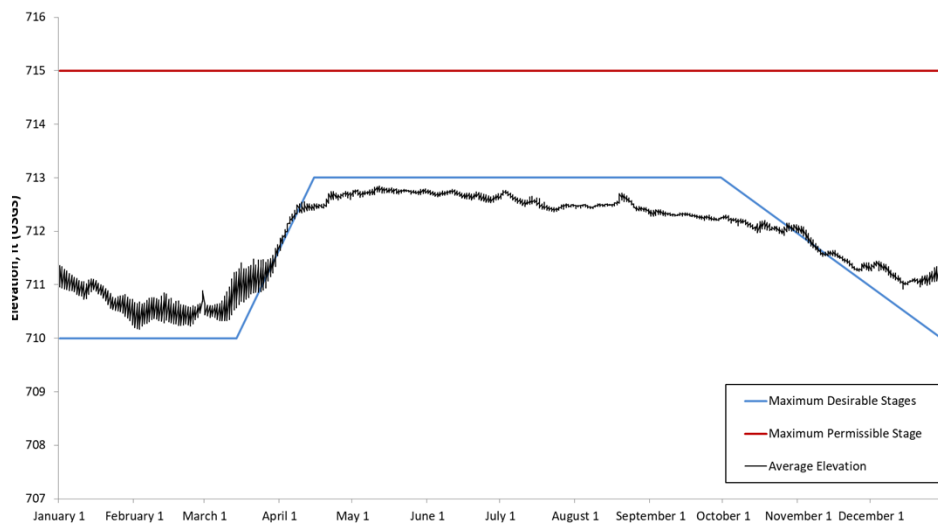
Safely manage the
elevation of Owasco
Lake in accordance
with the Army Corp
of Engineers Rule
Curve

Owasco Lake Elevation Rule Curve

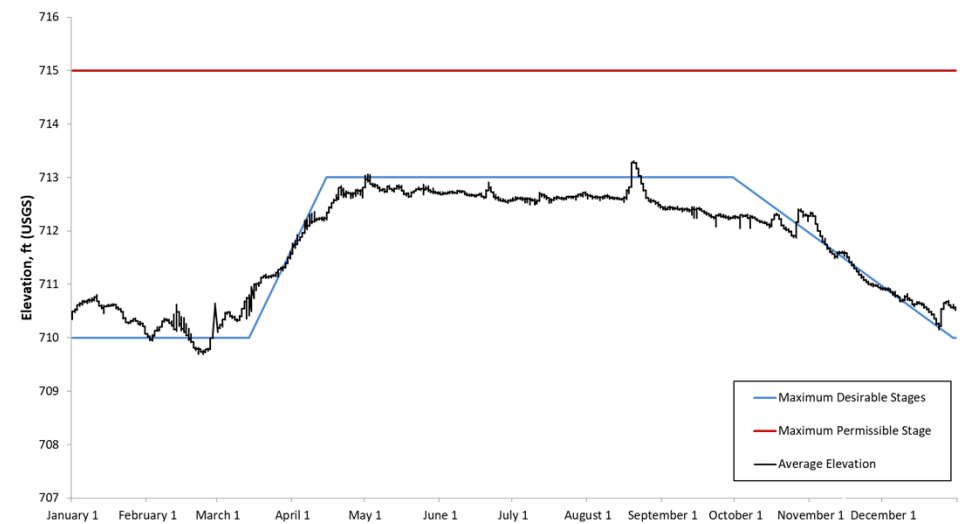


Past Performance?

Average Elevation of Owasco Lake: 2008 - 2021 (14 Years)

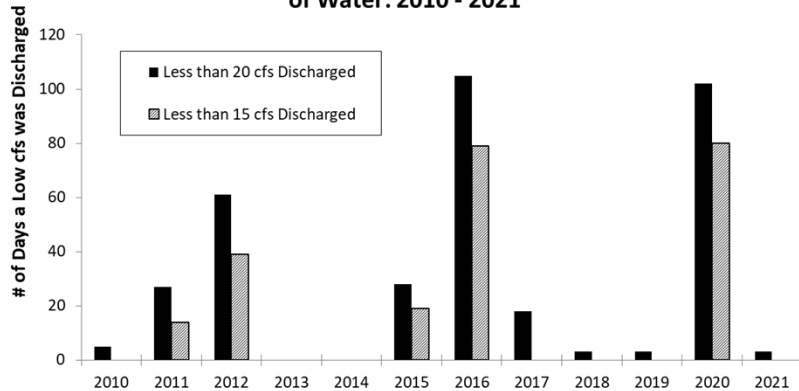


Average Elevation of Owasco Lake: 2019 - 2021 (3 Years)

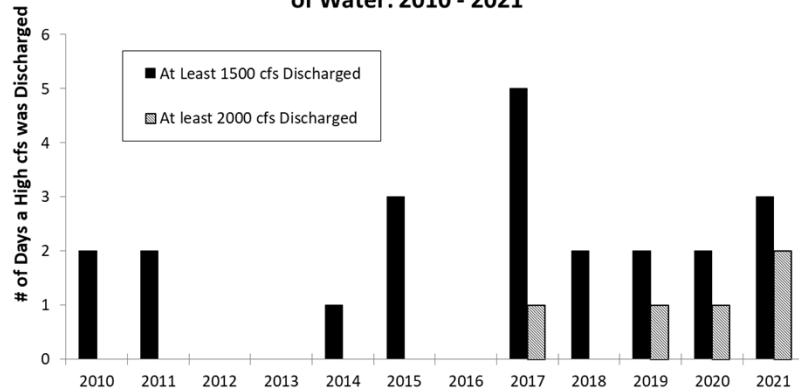


Hitting the Curve can be COMPLEX

Number of Days the Owasco Inlet Discharged a Low Volume of Water: 2010 - 2021



Number of Days the Owasco Inlet Discharged a High Volume of Water: 2010 - 2021



Weather

'Severe drought' in Upstate NY could last for months, experts say

Updated: Jan. 04, 2019, 10:45 a.m. | Published: Jul. 15, 2016, 5:55 p.m.

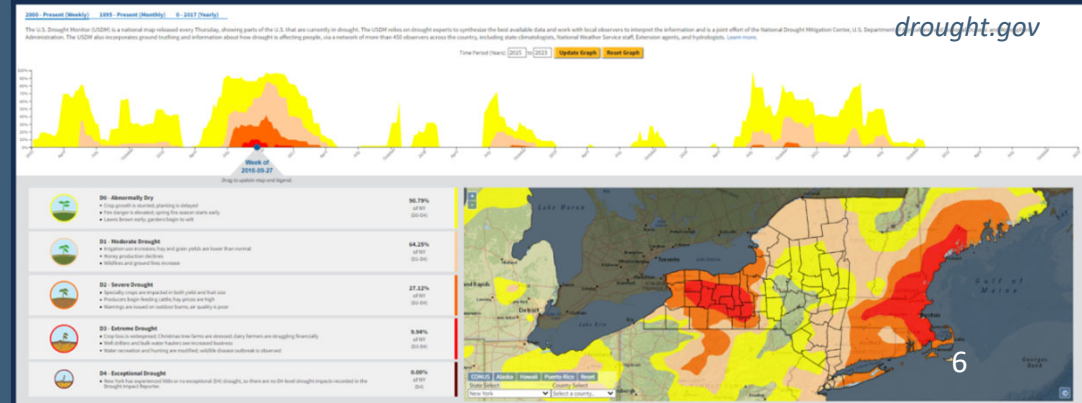
Weather

Flooding slams parts of CNY again; residents rescued from home, roads closed

Updated: Jan. 04, 2019, 4:16 a.m. | Published: Jul. 14, 2017, 10:04 p.m.

Syracuse.com

Explore Historical Drought Conditions in New York



DMU Goals

Keep the lake at 712.75 during a 100 year drought.

Don't violate the WWTP SPDES flow requirement of 30 CFS year round, 60 CFS in June.

Manage river flow to maximize hydro power output – 350 CFS year round.



I need low flow to build North Division Street Bridge.

Don't exceed 100 CFS while I excavate coal tar down stream of State Street.

NYSDEC is releasing trout, please keep flow at 100 CFS for next 2 weeks.

I need high flows for swift water rescue training

I need low flow to build State Street Bridge.

River Flow and Emergency Action Plan

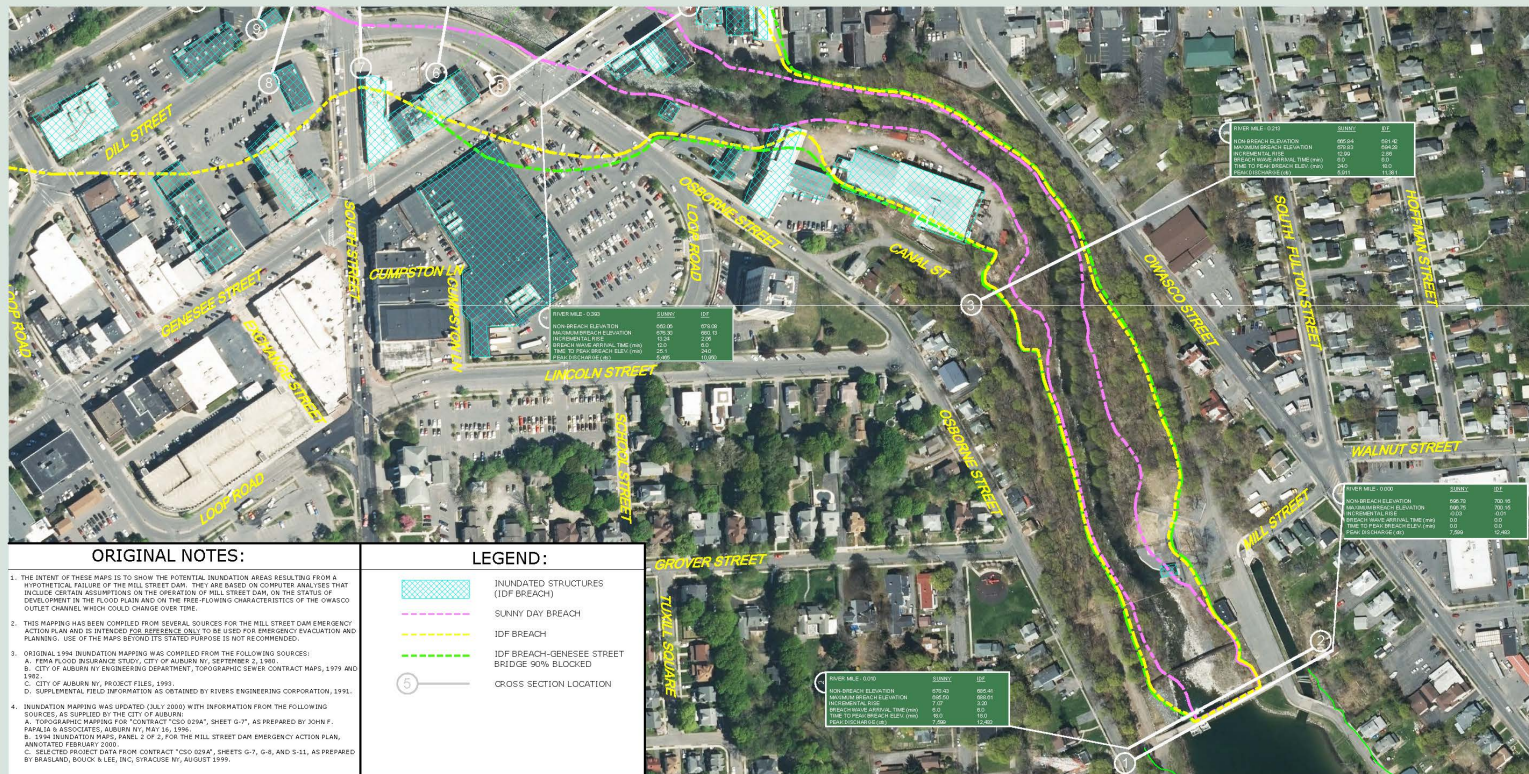
Annual Requirements



High Flow Operations/
Notification

Flow CFS	Operational Procedures	Expected Impacts	Organizations to Be Notified
< 100	Daily observation of Dams at low flows - hydro stations off	None	None
100-600	Daily observation of Dams and Stations at moderate flows	None	None
600-1000	Twice daily observation of Dams and Station with increased Surveillance and Maintenance cleaning of trash racks as needed	Increased awareness and enhanced periodic presence at stations and Dams	None at this time, Normal operations of power dictate a greater monitoring of sites through observation & SCADA
1000-1750	Increased hazard from debris in river flow, monitoring of dams and stations three times daily. Downstream assessment of potential impact areas.	Monitor clogging and stoppage of generation equipment due to debris on trash racks; erosion monitoring up and downstream of Dam	Notify Emergency Management Office, local Police and Fire and the NYS Canal Corporation
1750-2200	Shutdown and bypass of power Generation Station, wicket gates opened fully allowing flow-through constant monitoring of Dam,	Bank overtopping downstream, small-scale flooding likely in Lake and Downstream	Notify Emergency Management Office, local Police and Fire and the NYS Canal Corporation and review EAP Flow Chart for Notification Procedure
>2200	Hourly review of dam and site assets to ensure stability - mobilize STID for potential use. Evaluate and monitor downstream flooding	Moderate to large scale flooding	Contact FERC NY. Exercise EAP as necessary based on operation, inspection and monitoring.

Inundation Mapping



ORIGINAL NOTES:

- THE INTENT OF THESE MAPS IS TO SHOW THE POTENTIAL INUNDATION AREAS RESULTING FROM A HYPOTHETICAL FAILURE OF THE MILL STREET DAM. THEY ARE BASED ON COMPUTER ANALYSES THAT INCLUDE CERTAIN ASSUMPTIONS ON THE OPERATION OF MILL STREET DAM, ON THE STATUS OF DEVELOPMENT IN THE FLOOD PLAIN AND ON THE FLOOD-FLOWING CHARACTERISTICS OF THE CHASCO OUTLET CHANNEL WHICH COULD CHANGE OVER TIME.
- THIS MAPPING HAS BEEN COMPILED FROM SEVERAL SOURCES FOR THE MILL STREET DAM EMERGENCY ACTION PLAN AND IS INTENDED FOR REFERENCE ONLY TO BE USED FOR EMERGENCY EVALUATION AND PLANNING. USE OF THE MAPS BEYOND ITS STATED PURPOSE IS NOT RECOMMENDED.
- ORIGINAL 1994 INUNDATION MAPPING WAS COMPILED FROM THE FOLLOWING SOURCES:
 - FEMA FLOOD INSURANCE STUDY, CITY OF AUBURN NY, ESTIMATES 2, 1990.
 - CITY OF AUBURN NY ENGINEERING DEPARTMENT, TOPOGRAPHIC SEWER CONTRACT MAPS, 1979 AND 1987.
 - CITY OF AUBURN NY, PROJECT FILES, 1995.
 - SUPPLEMENTAL FIELD INFORMATION AS OBTAINED BY RIVERS ENGINEERING CORPORATION, 1995.
- INUNDATION MAPPING WAS UPDATED (JULY 2006) WITH INFORMATION FROM THE FOLLOWING SOURCES: AS SUPPLIED BY THE CITY OF AUBURN:
 - TOPOGRAPHIC MAPPING FOR "CONTRACT CSD 0284", SHEET G-7, AS PREPARED BY JOHN F. PAVELA & ASSOCIATES, AUBURN NY, MAY 16, 1990.
 - 1994 INUNDATION MAPS, PANEL 2 OF 2, FOR THE MILL STREET DAM EMERGENCY ACTION PLAN, ANNOTATED FEBRUARY 2000.
 - SELECTED PROJECT DATA FROM CONTRACT "CSD 0284", SHEETS G-7, G-8, AND G-11, AS PREPARED BY BRADLAND, BOONICK & LEE, INC., SYRACUSE NY, AUGUST 1999.

LEGEND:

- INUNDATED STRUCTURES (IDF BREACH)
- SUNNY DAY BREACH
- IDF BREACH
- IDF BREACH-GENESEE STREET BRIDGE 50% BLOCKED
- CROSS SECTION LOCATION

ADDITIONAL NOTES:

- AS STATED ON ORIGINAL REVISION JULY 2006 MAP CREATED BY RIVERS ENGINEERING CORPORATION, THE METHOD, PROCEDURE, AND ASSUMPTIONS USED TO DEVELOP THE FLOOD AREAS, THE LIMITS OF FLOODING SHOWN, AND FLOOD WAVE TRAVEL TIMES ARE APPROXIMATIONS AND SHOULD BE USED ONLY AS A GUIDELINE FOR ESTABLISHING EVACUATION ZONES. ACTUAL AREAS INUNDATED WILL DEPEND ON ACTUAL FAILURE CONDITIONS AND MAY DIFFER FROM AREAS SHOWN ON MAPS.
- THIS MAP WAS CREATED UTILIZING EXISTING DAM BREACH ELEVATIONS ESTABLISHED BY RIVERS ENGINEERING CORP., OCTOBER, 1994; REVISED JULY, 2000.
- BASE AERIAL MAPPING WAS SUPPLIED BY NYSGIS CLEARINGHOUSE AT [HTTP://WWW.NYSGIS.STATE.NY.US](http://www.nysgis.state.ny.us). ORTHORECTIFIED IS 2004 ONE FOOT COLOR CENTRAL ZONE AND IS GEOREFERENCED TO THIS DRAWING.
- THE EXISTING INUNDATION MAP CREATED BY RIVERS ENGINEERING CORP. WAS SCANNED, REFERENCED, SCALED, AND TRACED TO CREATE ALL CROSS SECTION LOCATIONS AND BREACH ELEVATION AREAS.



INUNDATION MAP DAM BREACH ELEVATIONS MILL STREET DAM EMERGENCY ACTION PLAN AUBURN, NEW YORK FERC No. 4372

FIGURE 1 OF 3

REVISIONS

NO.	BY	DATE	DESCRIPTION
1	SN	6-24-2010	UPDATED 2006 AERIAL BASE MAP WITH JULY 2000 INUNDATION MAP
2	SN	7-21-2010	REVISED MAP PER JULY 14, 2010 FERC REVIEW LETTER
3	WDT	1-17-2017	UPDATED 2015 AERIAL BASE MAP WITH JANUARY 2017 INUNDATION MAP



CITY OF AUBURN
ENGINEERING DEPARTMENT
MEMORIAL CITY HALL
24 SOUTH STREET
AUBURN, NY 13021
Phone: 315-255-4100 Fax: 315-253-3043

F-1







Resources we use?

USGS Gauge Stations

National Weather Service

- Emergency weather briefings (Binghamton Office)
- Snow cover estimates and equivalent rain projection

Local Radar

NYS Canal Corps

Local and State Emergency Management Office

Emergency Action Plan

Owasco Watershed Lake Association

Historical Data

State Dam

Stay Informed

Option 1

RiverFlows



River Data Lite



Free Apps
Available

USGS Stream Flow
and Lake Elevation
monitored real-time.

Option 2

Contact us:

Seth Jensen, Director of Municipal Utilities

sjensen@auburnny.gov

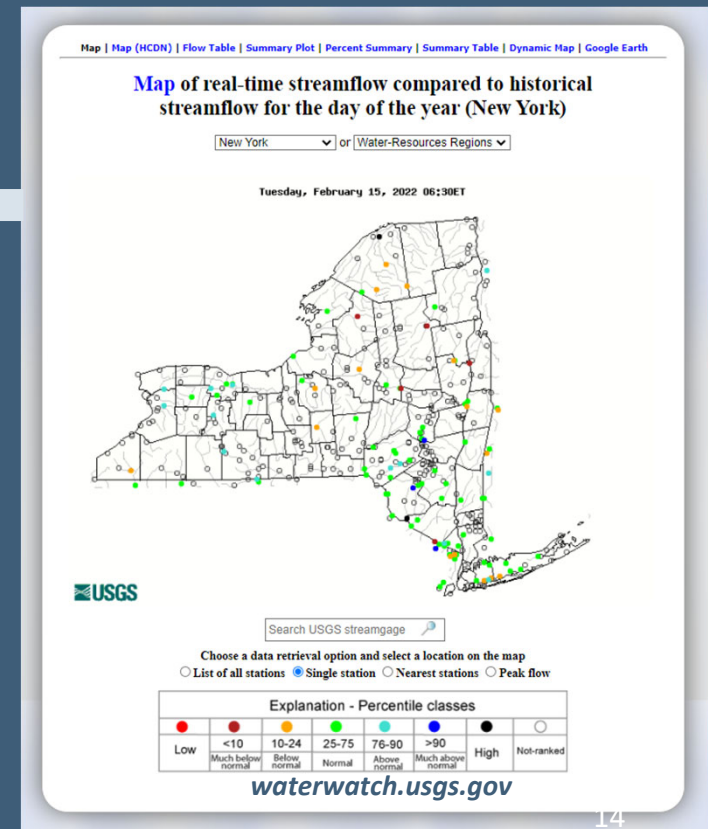
John West, Water Filtration Chief Operator

jwest@auburnny.gov

Option 3



Periodic lake
elevation and river
flow updates posted
on OWLA's FB page.



Poll Results/Questions/Discussion

and Thank You!