Lakes Region Planning Commission
103 Main Street, Meredith, NH 03253
603-279-5334 | Fax 603-279-0200
www.LakesRPC.org

LRPC Executive Board Meeting

Wednesday, December 8, 2021

9:00 – 11:00 AM

HYBRID MEETING

In-Person Attendance

LRPC Office, **Second Floor Conference Room**
Humiston Building, 103 Main Street, Meredith, NH 03253

Virtual or Telephone-only Attendance

Online Access via Zoom: https://us02web.zoom.us/j/81296029045

Telephone Access: **1-929-205-6099** | Meeting ID: **812 9602 9045**

AGENDA

Seven (7) Executive Board members must be present in-person at the meeting location to establish a quorum.
The quorum can vote to allow remote participation by other Executive Board members in conformance with RSA 91-A:2, III.

1. **Call to Order** *(if quorum present, vote to allow remote participation)*
2. **Draft Minutes of November 10, 2021** Attachment
3. **Finance Report** *pending / available at meeting*
4. **Monthly Executive Reports** *(October & November)* Attachments
5. **Committee Reports**
   a. Transportation Technical Advisory Committee (TAC) Attachment
6. **Old Business**
   a. Annual Meeting Planning
   b. Annual Meeting Awards Descriptions / Nomination Forms Attachment
   c. Proposed Language for Updated Award Attachment
7. **New Business**
   a. FY21 Draft Annual Report *pending / available at meeting*
8. **Roundtable**
9. **Adjourn**

NEXT MEETING: **March 9, 2022**

MEETING LOCATION ACCESSIBILITY

Please Note: This meeting location is not handicapped-accessible and is located on the second floor of our building. The second floor is accessible only via a steep, wide staircase with uneven tread depth / riser height. CAUTION should be used when ascending and descending. There are handrails on both sides. There is no elevator.

If you require accommodation to access this meeting, please notify the LRPC in advance at 603-279-5340.

The Lakes Region Planning Commission reserves the right to hold a non-public session whether noted on the Agenda or not. Notice of a non-public session on an agenda is for planning purposes only.

Latest News

IN MEETING PACKET (*email and hardcopy*):

- **The deadly myth that human error causes the most car crashes**
  November 26, 2021

- **So far, drinking water and wastewater have claimed the most in federal aid**
  November 22, 2021

- **The Bipartisan Infrastructure Law Will Deliver for New Hampshire**
  November 22, 2021

- **Study: Lake Winnipesaukee worth over $17 billion**
  November 19, 2021

- **Outdoor industry a 'significant driver' of New Hampshire's economy**
  November 16, 2021

- **New Hampshire Infrastructure Investment and Jobs Act State Fact Sheet** (PDF)

- **How federal funds will bolster infrastructure in New Hampshire**
  November 11, 2021

- **7 Ways the New Infrastructure Package Invests in Planning**
  November 10, 2021

- **The Big Problem with Plastic**

ONLINE ONLY:

- **APA Webinar: Retrofitting Bedroom Communities for an Equitable and Sustainable Future**
  December 17, 2021, **1 PM**

- **Reforming Local Land Use Regulations To Increase Housing Production**
  November 23, 2021

- **Shaheen Leads Delegation in Securing $3.7 Million to NH to Improve Coastal Resilience against Natural Disasters**
  November 22, 2021

- **Somersworth Invests Millions in Affordable Housing**
  November 19, 2021

- **Commuter rail to New Hampshire debate returns after infrastructure bill signing**
  November 18, 2021

EXCERPT BELOW TAKEN FROM: http://www.gencourt.state.nh.us/rsa/html/VI/91-A/91-A-2.htm

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91-A:2 Meetings Open to Public. –

III. A **public body may**, but is not required to, **allow one or more members of the body** to **participate** in a meeting **by electronic or other means** of communication **for the benefit of the public and the governing body**, subject to the provisions of this paragraph.

(a) A **member of the public body** may participate in a meeting other than by attendance in person at the location of the meeting **only when such attendance is not reasonably practical**. **Any reason that such attendance is not reasonably practical shall be stated in the minutes of the meeting.**

(b) Except in an emergency, a quorum of the public body shall be physically present at the location specified in the meeting notice as the location of the meeting. For purposes of this subparagraph, an "emergency" means that immediate action is imperative and the physical presence of a quorum is not reasonably practical within the period of time requiring action. The determination that an emergency exists shall be made by the chairman or presiding officer of the public body, and the facts upon which that determination is based shall be included in the minutes of the meeting.

(c) Each part of a meeting required to be open to the public shall be audible or otherwise discernable to the public at the location specified in the meeting notice as the location of the meeting. **Each member participating electronically or otherwise must be able to simultaneously hear each other and speak to each other during the meeting, and shall be audible or otherwise discernable to the public in attendance at the meeting's location. Any member participating in such fashion shall identify the persons present in the location from which the member is participating.** No meeting shall be conducted by electronic mail or any other form of communication that does not permit the public to hear, read, or otherwise discern meeting discussion contemporaneously at the meeting location specified in the meeting notice.

(d) Any meeting held pursuant to the terms of this paragraph shall comply with all of the requirements of this chapter relating to public meetings, and shall not circumvent the spirit and purpose of this chapter as expressed in RSA 91-A:1.

(e) A member participating in a meeting by the means described in this paragraph is deemed to be present at the meeting for purposes of voting. **All votes taken during such a meeting shall be by roll call vote.**

Source. 1967, 251:1. 1969, 482:1. 1971, 327:2. 1975, 383:1. 1977, 540:3. 1983, 279:1. 1986, 83:3. 1991, 217:2. 2003, 287:7. 2007, 59:2. 2008, 278:2, eff. July 1, 2008 at 12:01 a.m.; 303:4, eff. July 1, 2008. 2016, 29:1, eff. Jan. 1, 2017. 2017, 165:1, eff. Jan. 1, 2018; 234:1, eff. Jan. 1, 2018. 2018, 244:1, eff. Jan. 1, 2019.

Lakes Region Planning Commission
103 Main Street, Suite 3
Meredith, NH 03253
603-279-5334 | www.LakesRPC.org

LRPC Executive Board Meeting

DRAFT Minutes of November 10, 2021

PRESENT	John Ayer (Chair), Mardean Badger, Bill Bolton, Steve Favorite, David Katz, David Kerr, Jean Marshall (virtual), Robert Snelling, Steve Wingate (virtual)
ABSENT	Dean Anson, Pat Farley, Tony Giunta
STAFF	Jeff Hayes (Executive Director), Tracey Ciriello (Meeting Recorder)
PUBLIC	None
LOCATION	Hybrid Meeting: LRPC Office, 1st Floor Conference Room, Meredith / Zoom Conference

1. **Call to Order**
   The Chair called the meeting to order at 9:02 AM and stated a quorum was present.

2. **Approve Minutes of October 13, 2021**
   D. Katz moved to accept the minutes of October 13, 2021 as presented. S. Favorite seconded the motion. Voice vote taken. ***SO VOTED***

3. **Finance Report**
   J. Hayes reviewed the Treasurer's Report for month ending October 31, 2021 and answered questions such as contract overages for Hazard Mitigation Plan updates, which take up considerable time and must be completed to satisfy multiple reviewers at state and federal levels. He reported that the network server is due to be replaced/upgraded. D. Katz asked if data collection was finished for the Plymouth culverts contract; the monthly progress report from Finance showing project status was not available so J. Hayes will check.

4. **Monthly Executive Report**
   The monthly written report was not available so J. Hayes reported verbally on items of note for the month's activities. He provided an update on the regional housing needs assessment, noting that federal law stipulates a percentage of housing stock must be designated as fair housing. A potential checklist regarding what specific things a town can do, including updating zoning regulations and ordinances, to ensure adequate fair housing vs. relying only on special developments was discussed. The Chair suggested that visiting other towns to look at their developments in person can be beneficial.

   There is a push by USDA to get the word out regarding water & sewer capacity and stormwater management around landfills and transfer stations. Another USDA project is the Streetscaping planning grant, underway in Ossipee and Plymouth so far. The USDA has implementation dollars—as opposed to planning dollars for TAT (technical assistance & training) disaster grants—for projects such as water & sewer, broadband, and stormwater, and they want to work with LRPC. R. Snelling asked about funds for responding to climate change versus affecting change towards climate change. J. Hayes also noted concerns with transportation funding include availability of contractors and supply chain issues.

5. **Committee Reports**
   a. **Transportation Technical Advisory Committee (TAC)**
      D. Kerr reported the second meeting in a row that a quorum was not present, but that the meeting was a good one due to the guest speakers and successful use of LRPC's new Meeting Owl video conferencing tool. Meredith's Community Development Director John Edgar spoke about the road safety audit process, which towns can request from NHDOT, and NHDOT Project Engineer Samantha Fifield discussed NHDOT Highway Maintenance District 3 and ditch maintenance policy. D. Kerr noted that aside from Ms. Fifield and the NHDOT Commissioner, there were no other women. On the other

hand, the LRPC TAC has good representation from women and LRPC women staff do traffic counting; also, many school bus drivers in the region are women. He cited that 33-39 positions have been lost throughout District 3, and that there are currently 96 positions from Conway to Loudon, with 14 vacancies, including in Meredith, Moultonborough, and Tuftonboro. The deadline for road safety audits is getting closer.

6. **Old Business**

   a. **Annual Meeting Planning Updates**

   Rhonda Perry, the most recent temp administrative assistant, has accepted the offer to act as a part-time/as needed event planner for the 2022 annual meeting and will begin after Thanksgiving. The Chair and Executive Director visited Peabody Place in Franklin yesterday and awarded John Cotton the 2021 Kim Ayers Award, holding a little ceremony with John's wife, Tina, and Peabody Place staff. Mr. Cotton was deeply appreciative. Photos taken by staff are being compiled and a press release is forthcoming. A draft write-up for the proposed John Cotton award is needed and will be available at the next meeting. How we deal with retiring the Kim Ayers Award will need to be addressed as well. Discussion continued regarding whether to create a separate award or combine with the Kim Ayers Award and touched upon professional vs. volunteer and keeping the public service aspect. D. Katz moved to rename the Kim Ayers Award to the Ayers–Cotton Environmental Service Award. R. Snelling seconded the motion. Voice vote taken. ***SO VOTED***

   Email memo from the Nominating Committee needs to be drafted. The Chair and Vice Chair are the Nominating Committee members.

   b. **Annual Meeting Awards Timeline**

   Covered in discussion above.

   c. **Tentative Timeframe for Nominating Committee, Awards Committee, et al**

   Addressed during discussion above.

7. **New Business**

   a. **Network Server Replacement**

   Price point is based on 25 users. One of the improvements will be ability for any user to log on to any workstation and have access to items based on the user profile. J. Hayes confirmed to D. Katz's inquiry that LRPC does not host the website on its server and that it was hosted by a third party.

   b. **Meeting Location for December 8 and April 13 Executive Board Meetings**

   J. Hayes noted the meeting room conflict for December and April and asked for input regarding an alternate location. The consensus was to meet in the upstairs conference room on December 8. J. Hayes noted the only issue was accessibility.

8. **Roundtable**

D. Katz, New Hampton—First public hearing held on 12 zoning amendments, including a private events ordinance addressing commercial activity within residential and agricultural areas. He will be out of state for the December and April meetings.

M. Badger, Ashland—Parcel of land consisting of 26 acres—owned by four different parties—is before the Planning Board. Aggressive marketing must be underway already; this is one of the largest pieces of land near downtown, in the Mill Pond area, behind the ballfield, and will be a challenge for the Planning Board, and possibility the ZBA. There are many unique aspects (and access points), with possible use ideas ranging animal rescue shelter to yoga. T-Mobile will be adding a set of antennas to an existing cell tower.

B. Bolton, Plymouth—The Town has a meeting with NHDES this afternoon regarding and easement that a developer is trying to give to the town. The Conservation Commission wanted a trail but an NHDES staff member indicated it was not allowed.

R. Snelling, Holderness—Still tweaking a solar ordinance but should be ready in time for placement on the March town meeting warrant. And a year after the cell tower controversy, there is still nothing put on it.

D. Kerr, Barnstead—Lot line adjustment was one of the routine items at the last Planning Board meeting. He suggested to the town and new Road Agent doing an RSMS study and having LRPC do a presentation on it; they were receptive to it and would like LRPC to give a presentation in the spring. (D. Katz also offered to help/share information from New Hampton having gone through the process.)

S. Favorite, Bristol—Fiber optic cable is being installed at his house today. He described how much more difficult fiber optic installation was than copper, explaining how the process literally requires clean hands because the surface of the cable must be unmarred and free from dirt. He also described his 3-ring maintenance books/binders for updating and maintaining HMPs when he worked for FEMA, and the importance of standardizing plans whenever possible so you don't reinvent the wheel each time.

J. Marshall, Freedom—Short-term rentals are a big issue and will be the subject of a Planning Board hearing on November 13—she will provide an update in December on what happens.

S. Wingate, Tuftonboro—Pretty quiet in general; going through the 2022 budgeting process.

J. Ayer, Gilford—The Planning Department received an application from Boston University regarding rocket testing at Laconia airport. There are over 50+ acres and over the course of a year there may be up to a minute of a brief but very loud, high-decibel sound. The rocket only weighs approximately 40 lbs with aluminum exterior/copper interior and uses liquid fuel. An application for a new Starbucks in front of Lowes has also been received. Someone has inquired about the old Getty station across from Walmart, in a prime commercial area, for possible use as a car wash or self-storage. There has been pushback regarding the STR ordinance from a Planning Board member who wants to ensure the Planning Board doesn't overreach. Someone may be planning to put it on a warrant article to try to ban it completely.

R. Snelling noted to J. Hayes that he has been sitting in on NHARPC meetings at times but was not sure if he was still assigned to be on it as liaison. He also noted that NHARPC's focus seems to be mostly internal and suggested they become active in decision-making on where ARPA / GOPHER funds are to be spent.

9. **Adjourn**
The Chair declared the meeting adjourned at 11:10 AM.

Respectfully Submitted,
Tracey Ciriello, Meeting Recorder

MOTIONS SUMMARY
MOTIONED / SECONDED / RESULT

1.	Approve October 13 minutes as presented	Katz / Favorite / passed
2.	Rename The Kim Ayers Award as the Ayers–Cotton Environmental Service Award	Katz / Snelling / passed

Lakes Region Planning Commission

Monthly Executive Report

FY22
October 2021

General Administration | Education & Outreach

- The **October Commission Meeting** was hosted by Town of Moultonborough at the Moultonborough Public Library. The topic was **Solid Waste Legislation and Recycling Markets** with virtual guest speakers Michael Nork from NHDES and Heather Herring from Northeast Resource Recovery Association (NRRA), led by LRPC Solid Waste Planner Paige Wilson.

Because a quorum was not present at the meeting, **FY23 HHW appropriations** were not formally accepted by vote and are postponed until the March 2022 Commission Meeting. The Executive Board previously reviewed HHW appropriations for FY23 and accepted them as presented on October 13, 2021, for submittal to the full Commission.

- Due to travel scheduling conflicts before and after Thanksgiving, the Executive Board voted on October 13 to **cancel the November 29th Commission Meeting**.

STAFF ACTIVITIES & TRAINING

- **Principal Planner Susan Slack** co-wrote an article about streetscaping, ***Sidewalk Planning***, for the Nov/Dec 2021 issue of NHMA's *Town & City* magazine.
- **Assistant Planner Jessica Bighinatti** attended the CNHRPC Commute Smart Training Webinar. She also took a lunch webinar on Taking a Look at the New 2020 Census Data for New Hampshire Communities.
- **Solid Waste Planner and Assistant Grant Administrator Page Wilson** attended a two-day grant writing workshop at Keene State College.
- **Principal Planner Position.** With Susan Slack anticipating retirement around April 2022, the search has begun to find candidates for a new Principal Planner; the job has been posted to multiple websites.

Regional

- **Executive Director Jeff Hayes** and **Principal Planner Susan Slack** met virtually with **Executive Councilor Cinde Warmington** who reached out to discuss community development priorities in our region and to hear LRPC's thoughts on the proposed Ten Year Plan.
- Participated in virtual roundtable discussions hosted by NHMA about how county and local governments can use **American Rescue Plan Act (ARPA) funds** in Belknap, Carroll, Grafton, and Merrimack Counties.
- **USDA TAT Grant for Streetscaping**. Reviewed and edited pedestrian infrastructure reports for Ossipee and Plymouth. Worked with PSU intern on streetscaping maps for Plymouth and Ossipee.
- **Pemigewasset River Local Advisory Committee** (**PRLAC**). Provided meeting support and materials for meetings. Distributed an appeal for administrative funding to PRLAC communities ($300 each) and conveyed to members that an increase in administrative funding will be needed for the FY24 request. Distributed membership renewal notices to half a dozen members with expiring terms. Began transition of new staffing support for PRLAC, from Regional Planner Dave Jeffers to Solid Waste Planner/ Assistant Grants Administrator Paige Wilson.
- **Winnisquam Watershed Management | Pardoe Foundation Grant**. Monitored Lake Winnisquam Watershed Plan update and review of data collection and QA/QC process.

Economic Development

- **Regional Housing Needs Assessment**
  Participated in Data Subcommittee meetings with the NH Office of Planning & Development. Principal Planner Susan Slack was interviewed by the Laconia Daily Sun twice about regional housing needs and regulatory barriers to affordable housing.
- **Community Development Block Grant** (CDBG)
  Submitted the first claims for the new 2021-2022 Microenterprise Technical Assistance awards for Grafton County.
- **Northern Border Regional Commission Grants** (NBRC)
  - Submitted and received approval from NBRC for updated total project costs with federal matching funding backup sources for the Wolfeboro GALA Makerspace project.
  - Returned $1M grant funding to NBRC for the Lakes Region Facility (former Laconia State School).
  - Met with Town of Bristol to assist with close-out of Broadband Networking project.
  - Met with Lakes Region Community College (LRCC) to assist with close-out of project.

Local

- **Andover**. Discussed expiration of site plan approval with Planning Board member.
- **Bridgewater**. Sent copy of existing Zoning map to Principal Planner and discussed revisions due mid-November for work with the Planning Board. Continued updating HMP plan sections; prepared quarterly report to NH HESM.
- **Effingham**. Discussed motions for rehearing with Effingham ZBA chair
- **Gilmanton**. Edited maps of Gilmanton for CCDS project.
- **Northfield**. Discussed grants for sidewalk improvements/what to include in a proposal with Assistant Town Administrator. Continued Circuit Rider assistance to Planning & Zoning Boards.
- **Plymouth**. Continued providing Circuit Rider assistance to Planning Board and Department.
- **Sanbornton**. Corresponded with Zoning Administrator regarding updating maps showing the Aquifer Conservation Overlay.

  Discussed zoning amendment for commercial use by conditional use permit in Aquifer zone with Land Use Clerk.
- **Wolfeboro**. Gathered information for Wolfeboro Commissioner on NHDES model stormwater ordinances, regulations, and fact sheets.
- **Municipal Traffic Counts**. Discussed options for several speed counts around Effingham, likely early next summer. Processed data and delivered a speed report to Center Harbor and volume report to Tamworth.
- **Statewide Asset Data Exchange System** (SADES). Worked on initial mapping and forecasting (RSMS) and use of new state portal (CCDS). Revised outreach materials for data collection programs.

Household Hazardous Waste

- Submitted report, supporting materials, and invoice to NHDES. Wrapped up season with final HHW Coordinators' meeting.
- Addressed several inquiries from residents regarding safe disposal, especially of old gas (referred to LRHPF).
- Compiled and distributed **slideshow/video** of the summer HHW collections to HHW Coordinators.

Solid Waste Management

- Completed FY21 Solid Waste Management Grant entrance conference with USDA regional staff to discuss this year's work plan.
- Met with **Tamworth's** Transfer Station Improvement Committee and USDA's Area Director for NH/VT to discuss grants for developing their facility infrastructure.
- Hosted October LRPC Commissioner meeting on Updates to Recycling Markets and NH Solid Waste Legislation.
- Completed site visits to **Southwick Elementary** in Tilton and **Winnisquam Regional Middle School** in Tilton (*serving Northfield–Sanbornton–Tilton*) to discuss waste audits and on-site food scrap composting.

School Greenhouse Site Visits *(Photos by Paige Wilson)*

Clockwise from left: *Winnisquam Regional Middle School exterior & interior; Southwick Elementary close-up, exterior, & interior*

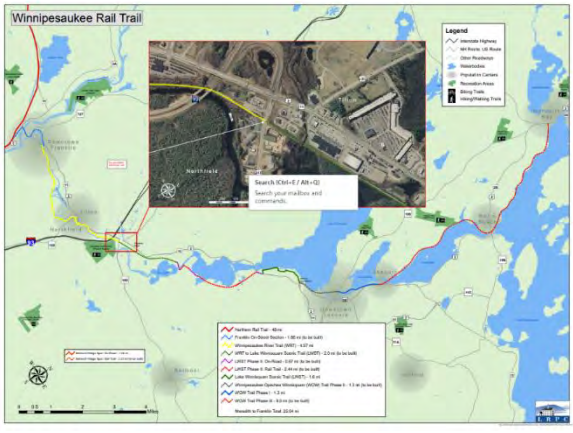
EPA Healthy Communities Grant

- Completed final site visits with Camp Sentinel, Merrowvista, and YMCA North Woods/Pleasant Valley Camps to close out project work and discuss 2022 program plans.
- Submitted Q4 report to EPA.

Transportation Planning

- **Bike/Ped Report**. Added updates to Lakes Region Bike Ped Report update, including collection of new data, new maps, drafting of survey, communication with Newfound Pathways.
- **TAC Support**. Set up and supported October TAC meeting in Laconia. Continued updates to TAC membership.
- **GACIT Hearings**. Created LRPC PowerPoint presentation for incorporation into NHDOT's presentation to the GACIT summarizing Ten Year Plan and TAP project proposals submitted by the regional planning commissions. Participated in GACIT meeting in Conway and GACIT hearings in Franklin, Plymouth, and Laconia.
- **Rail-Trail Mapping**. Updated and delivered a couple of maps of the Winnipesaukee Rail-Trail for inclusion in the update of the 2012 Bike/Ped Plan.

Slide from GACIT Presentation



Winnipesaukee Rail-Trail Map Update

Mapping by LRPC Regional Planner David Jeffers

ACRONYMS

ARPA	American Rescue Plan Act
CCDS	Culverts and closed drainage systems
CDBG	Community Development Block Grant
CNHRPC	Central NH Regional Planning Commission
GACIT	Governor's Advisory Commission on Intermodal Transportation
HNA	Housing Needs Assessment
HHW	Household Hazardous Waste
LPA	Local Public Agency
LRHHPF	Lakes Region Household Hazardous Product Facility
NHDES	NH Department of Environmental Services
NHDOT	NH Department of Transportation
NHHSEM	NH Homeland Security & Emergency Management
NHMA	NH Municipal Association
NHOPD	NH Office of Development *(formerly NHOSI)*
NHOSI	NH Office of Strategic Initiatives *(now NHOPD)*
NRRA	Northeast Resource Recovery Association
PRLAC	Pemigewasset River Local Advisory Committee
QA/QC	Quality assurance/quality control
RSMS	Road Surface Management System
SADES	Statewide Asset Data Exchange System
TAC	Transportation Advisory Committee
TAP	Transportation Alternatives Program
TAT	Technical Assistance & Training
UPWP	Unified Planning Work Program
USDA	US Department of Agriculture

Lakes Region Planning Commission

Monthly Executive Report

FY22
November 2021

General Administration | Education & Outreach

- **Brownfields funding sought.** Wrote and submitted an EPA Brownfields Assessment grant to bring nearly $500K to distressed properties throughout the region.
- LRPC Chair John Ayer and Executive Director Jeff Hayes presented the **2021 Kim Ayers Award to John Cotton** of Andover, NH on November 9 at Peabody Place in Franklin.

PICTURED AT LEFT:
John Cotton (center) accepts award originally established by the LRPC Executive Board in 1987
Photo courtesy of Tina Cotton

STAFF ACTIVITIES & TRAINING

- As an appointed member of the LCHIP Board of Directors representing regional planning, **Principal Planner Susan Slack** participated in and provided leadership and support for monthly board meetings and succession planning regarding its executive director's plan to retire.
- **Solid Waste Planner & Assistant Grants Administrator Paige Wilson** attended a two-day FEMA Training.
- **Grants Administrator Tracey Secula** participated in a required CDFA CDBG webinar.
- **Assistant Planner Jessica Bighinatti** attended two webinars, one on Virtual Public Involvement/ Planning & Environmental Linkages and one on Electric Vehicle (EV) Charging.

Regional

- **Belknap Floodplain Maps Still in Process.** Participated in FEMA webinar on development on and status of Floodmaps for the Winnipesaukee basin. Sessions were offered to local authorities to review specific sections; final map products are still a year off.
- **NH Geodata Portal**. Completed public improved access to UNH GIS mapping site.
- LRPC Staff attended a briefing on **infrastructure** by New Hampshire's Congressional delegation.
- **Pemigewasset River Local Advisory Committee (PRLAC) Support**. In the process of pursuing funding for the Pemigewasset River Corridor Management Plan Update.
- **USDA TAT Grant for Streetscaping**. Ongoing project providing Technical Assistance to a number of communities.

Sidewalks, Crosswalks, and Curbs in Ossipee and Plymouth
LRPC Staff Photos

Economic Development

- Completed a draft template for the **Regional Housing Needs Assessment**.
- **NH Business Finance Authority**. Executive Director Jeff Hayes participated in NHBFA's November board meeting.
- **Community Development Block Grant** (**CDBG**) Submitted the first claims for the new 2021-2022 CDBG Microenterprise Technical Assistance awards for Grafton County.
- **Northern Border Regional Commission** (**NBRC**) Contracted to administer 3 new grants as the Local Development District (LDD) for NBRC for:
  1- **Lakes Region Community Developers** for the Gale School restoration project in Belmont.
  2- **Town of Hebron** for $995K for the construction of a 25-mile fiber optic network connecting to the Town of Bristol and University of New Hampshire's fiber networks.
  3- **Town of Sandwich** for $840K to construct a fiber optic broadband network which will service the whole town.

Local

- **Belmont**. Reviewed, discussed, and responded to Land Use Technician's inquiry regarding subdivion of lots, driveway regulations, and RSA 674:41.
- **Bridgewater**. Updated and refined Zoning map for use in discussion with Planning Board regarding potential Zoning changes. Continued HMP update.
- **Bristol Master Plan**. Completed Vision and Land Use sections of Master Plan.
- **Freedom**. Corresponded with Planning Board Chair regarding use of online mapping tools.
- **Northfield**. Circuit Rider planner assistance this month included responding to the Assistant Town Administrator regarding Airbnb and site plan review, attending the Planning Board meeting via phone, and reviewing a special exception application for the next ZBA meeting.
- **Plymouth**. Continued Circuit Rider assistance in support of Planning Board/Department. Continued RSMS and CCDS projects.
- **Tilton**. Followed up with Hazard Mitigation Plan Committee members regarding prioritization of materials to be returned at the end of the month. Continued HMP update.
- **Municipal Traffic Counts**. Finalized and submitted a report for Center Harbor and Tamworth, documenting template and processing instructions. Responded to and explored questions posed by Center Harbor Police Chief regarding accuracy of the data, including several correspondences with JAMAR staff.

Household Hazardous Waste

- Addressed question from Bristol Local Coordinator regarding HHW options as well as PGA (glass crushing options).
- Handled request for disposal options from Laconia resident about electronics. Submitted report to NHDES.

Transportation

- Prepared UPWP monthly billing and status report.
- Attended November State Interagency meeting with other Regional Planning Commissions.
- **Bike/Ped Plan Update.** Continued updating the 2021/2022 plan for the region, including creating new maps and data collection. Created a survey to be sent to TAC members and other biking members as a test run for the public survey. Met with the White Mountain Trail Collaborative and learned about their organization and how we can partner together in the future.
- **TAC Support.** Met with the new Sandwich TAC representative via phone and gathered and sent transportation information. Phone calls and email correspondence with TAC representatives from Gilford, Plymouth, and Tamworth. Prepared November meeting materials, including photos for presentation and press release.
- Gathered information for Tamworth official regarding noise abatement and traffic noise on NH16 (Chocorua village).

ACRONYMS

CCDS	Culverts and closed drainage systems
CDBG	Community Development Block Grant
CDFA	Community Development Finance Authority (NH)
GACIT	Governor's Advisory Commission on Intermodal Transportation
HHW	Household Hazardous Waste
HMP	Hazard Mitigation Plan
NHBFA	NH Business Finance Authority
NHDES	NH Department of Environmental Services
NHDOT	NH Department of Transportation
NHOSI	NH Office of Strategic Initiatives
PGA	Processed glass aggregate
PRLAC	Pemigewasset River Local Advisory Committee
RSMS	Road Surface Management System
SADES	Statewide Asset Data Exchange System
TAC	Transportation Advisory Committee
TAP	Transportation Alternatives Program
TAT	Technical Assistance & Training
UPWP	Unified Planning Work Program
USDA	US Department of Agriculture
WEDCO	Wentworth Economic Development Council

JOHN E. COTTON

Recipient of The 2021 Kim Ayers Award

IN MEMORY OF B. KIMBALL AYERS, JR.

Awarded by the Lakes Region Planning Commission Executive Board, Fall 2021

John Cotton, known as Mr. Geology by the Lakes Region Planning Commission and Mr. Groundwater of NH when he was interacting with the public before retirement, is well qualified to be the recipient of the Kim Ayers award. The award is bestowed upon a person who has consistently worked to maintain and improve the environmental quality of the region. A resident of Andover who owns land and a couple of rustic cabins in a cove on Lake Winnisquam in Meredith, John was born in New Hampshire, went on to Dartmouth like Kim Ayers, and was a founding member of the NH Geological Society.

His background includes assisting in the mapping of glacial deposits in Greenland and working on a variety of water resource projects for the U.S. Geological Survey (USGS). Some of these included developing the first groundwater wells for the Cape Cod National Seashore, a hydrologic atlas of groundwater levels in the Boston peninsula, and a statewide New Hampshire reconnaissance of stratified drift (sand and gravel surficial deposits) aquifers. The resulting reconnaissance maps became known as the Cotton maps that are cited in state statutes. These aquifer maps were further refined with material logs from drillers and depths, as well as commentaries specific to municipalities and groundwater recharge, discharge, and quality.

After he retired from the USGS, he joined the Solid Waste Management Bureau of the NH Department of Environmental Services where he was involved with landfill closures. These closures have the potential of contaminating groundwater and wetlands. Oversight was necessary to have landfills properly lined, covered, and monitored for many years. John continued to monitor Andover's landfill as a volunteer until the past few years.

In addition after retirement, he volunteered to map and advise other mappers of surficial geology on a topographic quadrangle basis and resolve contact line differences between maps before they were digitized and combined to create a state surficial map. He was also one of several leaders on a field trip examining the surficial geology along the Merrimack and Pemigewasset Rivers in the Lakes Region area. Before stepping down in 2019, he served for many years as one of Andover's appointed Commissioners to the Lakes Region Planning Commission and was an elected member of the Executive Board.

The Kim Ayers Award

In Memory of B. Kimball Ayers, Jr.

PAST RECIPIENTS

PATRICIA SCHLESINGER, NEW HAMPTON – 1988

RALPH KIRSHNER, TUFTONBORO – 1989

ELIZABETH BARDSLEY, ANDOVER – 1990

KENNETH SORLIEN, CENTER HARBOR – 1991

MARTHA CARLSON, SANDWICH – 1992

RAWSON WOOD, CENTER HARBOR – 1993

ROBERT HARRINGTON, LACONIA – 1994

JULIET E. E. PEVERLEY, ALTON – 1995

SIDNEY HOWE (POSTHUMOUSLY), HOLDERNESS – 1996

MILTON A. RADIMER, BRIDGEWATER – 1997

JOHN HODSDON, MEREDITH – 1998

FREDERICK ROZELLE, SANDWICH – 1999

DAVID ERLER, NEW HAMPTON – 2000

JOHN & LAURA NICHOLS, WOLFEBORO – 2002

BILL HUCKINS, NEW HAMPTON – 2003

CAROLYN BALDWIN, GILMANTON – 2004

ELTON PERKINS, TAMWORTH – 2005

JOHN MERSFELDER, TAMWORTH – 2007

MASON WESTFALL, BRISTOL – 2008

LARRY SPENCER, HOLDERNESS – 2009

NANCI RAE MITCHELL, GILMANTON – 2010

DONALD FOUDRIAT, SANBORNTON – 2011

DOUGLAS HILL, MEREDITH – 2012

CHRISTOPHER CONROD, TAMWORTH – 2013

DANIEL PARADIS, BRISTOL – 2014

JANAN HAYS, NEW HAMPTON – 2015

DUSTY DAVIES, TUFTONBORO – 2016

MAX STAMP, BRISTOL – 2017

LISA EGGLESTON, MEREDITH – 2018

JAMIE EMERY, NEW HAMPTON – 2019

JOHN E. COTTON, ANDOVER – 2021

Lakes Region Planning Commission
Transportation Advisory Committee
103 Main Street, Suite 3
Meredith, NH 03253
603-279-8171 | www.LakesRPC.org

Transportation Technical Advisory Committee (TAC) Meeting

Minutes of November 3, 2021 (Zoom and In-Person)

Members Present	LRPC Staff
Malcolm (Tink) Taylor - Holderness, Chair David Kerr – Barnstead Rick Ball – Belmont (Zoom) Steve Favorite – Bristol Seth Creighton - Franklin Meghan Theriault – Gilford Sheldon Morgan (alt)- Gilford Paul Hazelton - Hebron Krista Larsen – Laconia Rob Mora (alt) – Laconia John Edgar- Meredith Dari Sassan – Moultonborough (Zoom) Robert Pollock - New Hampton John Gotjen – Tamworth	Susan Slack, Principal Planner Jessica Bighinatti, Assistant Planner Reed Silvers, Intern **Guests**

Non-Voting Members
Bill Watson, NHDOT, Bureau of Planning and Community Assistance
Kim Rummo, NHDOT, Bureau of Planning and Community Assistance Chris Turgeon, NHDOT District 2 Samantha Fifield, NHDOT District 3

1. Welcome and Introductions / Call to Order

Chairman Taylor called the meeting to order at 2:00 p.m. Attendees and guests introduced themselves. The Right to Know Law requires a quorum of the membership of the Transportation Advisory Committee to be in person in order to vote on motions and take official actions. It was determined that there are twenty-four filled positions on the TAC, with six vacant positions, and that thirteen members are required to attend in person in order to establish a quorum for conducting business. With nine members in attendance at the location of the meeting, a quorum was not achieved.

2. Election of Chair and Vice Chair

Chairman Taylor said the election of a chair and vice chair would be postponed to the December 1 TAC meeting because a quorum was not available to vote on new officers.

3. Approval of Draft TAC Meeting Minutes

Chairman Taylor said a vote on approval of the October 6 minutes would be postponed to the December 1 meeting due to a lack of quorum. He asked if the members present wanted to propose any changes or corrections that would be voted on at the next meeting. There were no changes or corrections suggested.

4. Amendment of TAC Standing Rules and Procedures

S. Slack spoke on proposed amendments to the TAC's Standing Rules and Procedures, most of which are intended to bring them into compliance with the current provisions of RSA 91-A, the Right to know Law, which requires a quorum of the membership to attend in person at the physical location of the meeting.

Members discussed the proposed changes and suggested additional amendments

S. Creighton suggested to change **Article IV 4th paragraph**, which currently states**:** *Members appointed by municipalities shall attend all regular meetings of the TAC. In the event a member misses three (3) consecutive regular meetings, the appointing authority shall be so notified in writing by LRPC's Executive Board.*

S. Creighton suggested additional language that the TAC member should receive a courtesy notification of two consecutive missed meetings before the municipality is notified at the third missed meeting. If a member misses three consecutive meetings, they will be copied on the email to the town or city.

5. NH Ditch Maintenance Policy

Samantha D. Fifield, Project Engineer within the Bureau of Highway Maintenance for District 3 of the NHDOT, presented an overview of highway maintenance in District 3.

Background information about District 3 included:

- District three is one of the six highway maintenance districts in NH
- District 3 maintains 817 miles of state roadways in forty-four municipalities, maintains 90 buildings at 22 locations, and responds to emergencies and special events as needed.
- District 3 contains thirteen patrol sections (sheds), each responsible for approximately 40 to 70 miles of road. The two interstate crews maintain over one hundred miles each.
- There are several workforce vacancies in District 3, especially in Conway and Meredith with 44% and 43% vacancy, respectively.

K. Larsen asked if all Lakes Region Planning Commission communities are included in District 3. S. Slack and S. Fifield responded that most of them are in District 3 but there are a handful of communities that are located in District 2.

S. Fifield said summer maintenance tasks include:

Repair winter damaged to equipment and infrastructure and clean up

- Truck and Equipment Repairs
- Plow and Wing Repairs (scrape, paint)
- Infrastructure repairs (delineators, drainage, guardrail)
- Remove whips
- Pick up trash (typically rely on SOH groups for this)

Drainage Maintenance

- Clean out catch basins and culverts
- Clean out ditch lines
- Replace/repair culverts and headwalls
- Clean out water quality BMPs

Guardrail Maintenance

- Replace obsolete systems
- Install new locations depending on need
- Repair/replace systems damaged by errant drivers

Vegetation Maintenance

- Trim trees
- Mow grass
- Invasive Species Control

Pavement Maintenance

- Pothole repair
- Edge of pavement repairs
- Shoulder repairs
- Fill in ruts
- Pavement leveling (shim)

Building and Lot Maintenance

- Roofs & Siding
- Interior Painting
- Plumbing/Septic
- Furnace & hot water heaters
- Asphalt surfaces (parking, salt shed floor etc.)

- Living Areas (break rooms, bathrooms)
- Vegetation control (mowing, invasive species)

Winter Prep Work

- Prepare Plows and Wings
- Prepare Trucks
- Paint catch-basin location arrows
- Placement of consumable winter materials (sand, salt, brine, etc.)
- Training

T. Taylor asked about who paints the Ts and S on highways. Fifield said that telephone companies may paint the Ts instead of arrows to let them know where their lines run. B. Pollock asked if there was a difference between yellow arrows and white arrows and S. Fifield said that this may be due to paint shortage and that typically all arrows are yellow.

Fifield explained the District 3 maintenance plan:

- Rebuild washed out roads and supporting infrastructure
- Address surface runoff issues
- Prepare roadways for the current or the following year's paving program (replace degraded culvert crossings, grade ditch lines, drag shim ruts)
- Complete minor upgrades to fix troubled spots such as icing or frost heaves
- Construct specialized projects that address critical needs
    - Small culvert replacement (requires a crew of 7)
    - Large culvert replacement (requires a crew of 12-15)
    - Ditch line maintenance (requires a crew of 14)
    - Roadway sectional improvements (requires a crew of 15-20)
    - Safety improvements to intersections (requires a crew of 15-20)

T. Taylor asked what was the largest the diameter of a small culvert. Fifield responded that it is four feet. Fifield considers any culvert larger than a four-foot diameter to be a large culvert. The smallest diameter culvert that District 2 works with is 12" in diameter.

Fifield explained logistics and human resource realities in district 3:

- In addition to the existing vacancy rates, during the summer months, district 3 has a vacancy rate of up to 20% of available forces due to vacations.
- For most projects, extra workers from adjacent sheds are needed, further reducing the loaning shed's ability to maintain its sections.
- All districts must provide traffic control support to the DOT's bureau of Traffic for pavement marking operations, furthering reducing the loaning shed's abilities.

- The districts have a high percentage of turnover for highway maintainer positions, especially HMII employees who can make more elsewhere.
- A high percentage of District 3 workforce is retiring.
- New foremen are facing learning curves managing logistics associated with their job.

D. Kerr asked how hours of time worked when DOT employees are moving from shed to shed are accounted for. S. Fifield responded that she would contact the maintenance supervisors to answer the question. Foremen keep track of the hours each employee is work and traveling. All hours are accounted for. If it is work related, traveling is paid for each employee. Payment can be made in hours, mileage reimbursement (if a personal vehicle is used), or both. However, if the "borrowed" employee lives closer to the project site than their assigned shed, then they are not paid to travel directly to their site from their home. C. Turgeon from NHDOT District 2 said that employees who are called in get paid a three-hour minimum plus the number of hours they worked.

D. Kerr asked what percentage of the workforce in District 3 is female. Fifield said that there are currently no women working as highway maintainers for DOT in District 3. She explained that the only women working in this district are Nancy Spaulding, the assistant District engineer, and herself, the active utilities engineer, as well as a couple of women in offices. NHDOT actively recruits women for road maintenance positions, including attending job fairs at high schools.

K. Larsen said that throughout her years as an engineer for 22 years throughout Maine and New Hampshire she has seen two women in road maintenance jobs. She said that the gender disparity has been a problem for a long time and the best thing to do is outreach.

C. Turgeon said District 2 holds winter driver training every year for both newly hired drivers and regular employees. They also calibrate the spreaders so that the drivers are following the same policies regardless of load size.

M. Theriault said recruiting employees to fill vacancies is not a new problem. Once trained employees often leave for higher pay in the private sector. She asked Fifield how District 3 work can be better prioritized to avoid stretching sheds too thin on larger inter-shed projects. S. Fifield said the District tries to create a priority project list and establish a work schedule, that balances out the need with resources to the best of their ability.

6. Road Safety Audit Application

John Edgar, Meredith's Community Development Director, gave a presentation on the town's Main Street Road Safety Audit process, which began after a pedestrian fatality in June 2019 near the post office. The town's application for a Road Safety Audit was accepted by NHDOT's

Highway Safety Improvement Program. The application process included turning movement and pedestrian crossing counts conducted by LRPC and crash data compiled by the Meredith Police Department. The study area for the audit is the Main Street intersections of Lake St., Highland St., and Water St. NHDOT staff and consulting engineers visited Meredith and met with a group of town officials to discuss potential safety measures. A final Road Safety Audit report was issued.

J. Edgar said that the one consistent issue with the area is its building and residential density exacerbated by the large amount of on-street parking. He said near-term steps that have been taken include roadway "slow" stenciling, temporary no parking signs in some parking spots, and three sets of flashing pedestrian crosswalk signs (recommended in the audit). He said long-term recommendations include a bump-outs at the High St. and Dover St. intersections. A bump-out brings the pedestrian to the edge of moving vehicles on a raised curb area that facilitates observation of vehicles before stepping on to the crosswalk and shortens the distance to be crossed.

M. Theriault said that similar recommendations were put in place in Goffstown when she worked there, and said it takes people time to get used to such changes. J. Edgar said he hopes town residents will attend public meetings to advocate for improvements in pedestrian safety, adding that a walkable downtown should not compromise safety. M. Theriault suggested making Main Street one way is an option to create a more walkable downtown.

7. Transportation Updates

2023-2032 Ten Year Plan (TYP)

S. Slack announced the new public virtual meeting for GACIT will be held Nov. 3 at 7 pm. This is one of the last chances to make comments on the 2023-2032 TYP. LRPC made presentations at the three GACIT meetings located in the Lakes Region: Franklin, Laconia, and Plymouth.

8. Other Business

LRPC has recently purchased new technology to help improve the quality of Zoom meetings.

Next TAC Meeting is December 1.

9. Adjournment

The meeting adjourned at 3:45 pm.

Annual Meeting Award Description & History

The Kim Ayers Award

Since 1998

Given annually since 1988 by the Lakes Region Planning Commission in memory of B. Kimball Ayers, Jr., who faithfully and persistently worked to maintain and improve the environmental quality of the Lakes Region in New Hampshire. Like Kim Ayers, the award recipients have been active in one or more of the following areas: *Water quality of the lakes and of the groundwater; the preservation of wetlands; and the wildlife habitat of the region.*

QUALIFICATIONS

The recipient should be a person who lives in and has made a major voluntary contribution to the environmental quality of the Lakes Region. Particular considerations include but are not limited to: *Environmental education; a key role initiating and carrying through an on-going project; emphasis on water quality; and intergovernmental cooperation, i.e., coordination between municipalities or between state and local governments.*

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In Memory of B. Kimball Ayers, Jr.
For Outstanding Contributions To The Lakes Region Environment

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The Community Service Award has been given annually since 2015 by the Lakes Region Planning Commission to individuals who have made exceptional and sustained contributions to their community and/or to the economy of the Lakes Region.

Chairman’s Inspirational Award

2019 ONLY

Given By Chairman Wayne Crowley

While the Lakes region is literally in the middle of the live free or die state, our communities have long pulled together to support our residents in need. This is done every day through benefits, bean suppers, and community gatherings of all kinds. But the Tamworth Visiting Nurse Association has brought this to a whole new level. For many years now, the TCNA has provided medical care to all residents free of charge, mostly through private donations. We would like to honor this extraordinary commitment to community health with this Chairman’s Inspirational Award.

Benjamin Kimball Ayers, Jr. History

History/Background

- THE KIM AYERS AWARD
- 2019 was 30th Anniversary of Award
- Given annually in memory of B. Kimball Ayers, Jr. of Moultonborough
- Given annually since 1988 (except for one year, in 2001)
- Given in perpetuity, per the FY2010 town annual report

ALSO KNOWN AS:
Benjamin K. Ayers, Jr.
B. Kimball Ayers, Jr.
B. K. Ayers, Jr.
Kim Ayers

BORN *circa 1917 ?*
DOD **10/25/1987**

Parents: Benjamin Kimball Ayers Sr. & Irene Warner
Maternal great uncle was Benjamin Ames Kimball, builder of Kimball Castle

Graduated Dartmouth 1939
Dartmouth alumni magazine, March 1988 (OBITUARY)
http://archive.dartmouthalumnimagazine.com/article/1988/3/1/deaths

BENJAMIN KIMBALL AYERS JR. died of cancer of October 25 at the Lakes Region General Hospital, Laconia, N.H. Kim came from a family with a close association with Dartmouth, having had a great great-uncle who was graduated in 1850, an uncle in the class of '06, his father in the class of '11, a brother-in-law, Herb Mattlage '39, and a nephew, Stefen Mattlage '72.

Kim came to Dartmouth from Vermont Academy where he participated in football, skiing, glee club, dramatic club, and camera club. At Dartmouth he was no less active. He majored in geology, was a member of the varsity ski team, the Players, the Dartmouth Union, DOC Carnival Committee, and was a brother in the Phi Delta Theta fraternity.

He earned an M.S. at Thayer and a master's in teaching at the University of New Hampshire.

After more than five years in the navy in WW 11, doing salvage, diving, and firefighting, he specialized in offshore drilling in the Gulf of Mexico and the Persian Gulf. He is credited with erecting the first bow mooring to be installed for Exxon in Libya in the early 1960s so that tankers for the first time didn't have to be docked for loading. Prior to retirement, Kim taught science at Holderness School for five years, and helped with the skiing program.

In retirement Kim worked constantly to uphold the quality of the lakes, most prominently Winnipesaukee and Squam. **Shortly before his death, Kim was advised that the Lakes Region Planning Commission honored him by creating an annual Kimball Ayers Environmental Award.**

He was town moderator of Moultonboro for two years, a past president of the Winnipesaukee Association, and a director of the Lakes Region Clean Water Association. Surviving are his wife, Jean, daughters Bonnie D'Orlando and Deborah Ayers, and a son Alan.

Dartmouth alumni magazine, Oct 1962:

http://archive.dartmouthalumnimagazine.com/article/1962/10/1/1939

From the desk of B. K. Ayers Jr. in Marsa El Brega, Esso's man-made port for shipping oil out of Libya, and attached to an Alumni Fund check, comes the following:

Have been here for the past nine months in- stead of the short 30-day assignment it was sup- posed to be for assisting in the installation of a new and novel type of tanker mooring which will revolutionize the cost of deep water loading and unloading of tankers. We have been buffeted by the elements and by the usual run of unforeseen difficulties with a first of its kind.

Jean, my wife, and the children are settled in Wilton, Conn., after two years in Iran. They are building a camp on Lake Winnipesaukee and hope to enjoy it with the Herb Mattlages this summer. It is on Moultonboro Neck just opposite Nine Acre Island.

Sorry that I do not have any more news of classmates or future plans, but this desert certainly takes a lot of fighting just to exist, especially when combined with the stormy Mediterranean Sea which is supposed to be a quiet body of water.

Report of the Moultonborough Conservation Commission 1987

1987 saw the passing of our long-time chairman, **B. Kimball Ayers, Jr.** He died October 25th. Mr. Ayers was a dedicated and conscientious commissioner, spending many long hours attending Wetlands Board hearings. He acted as a watchdog for the environmental well-being of this community. As a retired engineer for Exxon, he was an experienced and knowledgeable scientist, and used his knowledge to try and protect the town from waste of our natural resources. Mr. Ayers was active in other organizations as well, being a commissioner to the Lakes Region Planning Commission, a member of the Lakes Region Clean Water Association, and treasurer to the N.H. Association of Conservation Commissions.

Kim will be greatly missed by the Conservation Commission. **He was more than just our chairman; he was our friend and conscience.**

John Cotton History

CURRENT PHYSICAL ADDRESS	HOME/MAILING ADDRESS	SPOUSE
Peabody Place 24 Peabody Place Franklin, NH 03235 603-934-3718 *as of March 2021*	148 Chase Hill Road East Andover, NH 03216 603-735-5724 jtcotton80@gmail.com	Tina Cotton *wedding anniversary 9/6/21* 603-735-5724 jtcotton80@gmail.com

- Admitted to Peabody Home (now Peabody Place) March 2021
- Officially diagnosed with Parkinson's disease
- Wheelchair-bound
- Undergoing physical therapy—freezes when walking, lack of facial expression due to the disease
- 60th wedding anniversary with Tina was 9/6/21
- Tina was thrilled to hear news of KAA award — She and John knew the 3rd Kim Ayers Award recipient very well, Elizabeth Bardsley (Andover 1990), who has since died.
- Personal visit (record for meeting) and and/or live Zoom would work well.

NOTABLE:

- **2014 NHDES Source Water Protection Award recipient:**

  For his exemplary work in the field of hydrogeology, providing pioneering work for the protection of groundwater resources in New Hampshire.

- **Founding member of NH Geological Society, 1990**

- **News from the New Hampshire Board of Professional Geologists**

  In the fall of 1999, Governor Jeanne Shaheen appointed the following four geologists to sit on the new Board of Professional Geologists:

  → Timothy T. Allen, Ph.D., of Keene State College, term expires October, 2004
  → **John E. Cotton, of the NHDES, term expires October, 2002**
  → Dorothy A. Richter, of Hager-Richter Geoscience, Inc., term expires October, 2005
  → Paul M. Sanborn, of Sanborn-Head & Associates, term expires October, 2003

https://onlinebooks.library.upenn.edu/webbin/book/lookupname?key=Cotton%2C%20John%20E%2E

https://www.govinfo.gov/content/pkg/CZIC-hd1694-n4-w384-1990/html/CZIC-hd1694-n4-w384-1990.htm

Of the four sources reviewed, the studies completed by the U.S.G.S. entitled *Availability of Groundwater in the Piscataqua and Other Coastal River Basins, Southeastern New Hampshire*, by John E. Cotton, Water Resource Investigations 77-70, 1977 (hereinafter referred to as the Cotton map) and Geohydrology, and Water Quality of Stratified Drift Aquifers in the Exeter, Lamprey, and Oyster River Basins, Southeastern, N.H."; 1990 give the best aquifer delineations. These studies identified areas of high, medium or low potential to yield significant quantities of groundwater (see Map E). The reference map provides the following narrative with respect to the delineated aquifers on the Cotton Map:

https://www.nytimes.com/1964/12/29/archives/rains-of-weekend-raise-hopes-that-long-drought-is-ending.html

12/29/1964
John Cotton of the Boston office of the United States Geological Survey said the smaller streams looked as they normally do in the spring.

http://library.mit.edu/F/3E4VBQGR3F7JUT6F62MHNGEQH431N9FVYUPC1BR6K1NEJANS1G-08465?func=find-acc&acc_sequence=029240499

1975
Ground-water levels on Boston Peninsula, Massachusetts [cartographic material] / by John E. Cotton and David F. Delaney ; Department of the Interior, United States Geological Survey ; prepared in cooperation with the Commonwealth of Massachusetts, Department of Public Works.

2013
Surficial geologic map of the Andover quadrangle, Merrimack County, New Hampshire / Cotton, John E. and Cotton, Anita M.

https://www.andover-nh.gov/sites/g/files/vyhlif146/f/uploads/mpappendixxivnaturalresourcessummary2011asof08252016_1472157202.pdf

The NH Geological Survey has scheduled John Cotton to map the surficial geology of the Andover topographic quadrangle in 2012-2013.

An aquifer is a formation, group of formations, or part of a formation that contains sufficient saturated, permeable material to yield significant quantities of water to wells and springs. Sand and gravel aquifers are generally more productive (quantity) than bedrock aquifers. The flatter areas of town that follow major drainages generally have sand and gravel aquifers. These are glacial deposits of sand and gravel that hold significant amounts of water in the pore spaces between the particles of sand and gravel. This groundwater is continuously replenished by rain and sometimes by surface water. John Cotton was instrumental in seeing that the aquifers in the stratified drift (layered, loose sands and gravels primarily of glacial origin) of the state were mapped in a reconnaissance study in the 1970s that was followed by more detailed work in the 1980s and 1990s. Most of the detailed mapping in Andover was done by him. Andover was given copies pertinent to the town of the reconnaissance and more detailed maps and reports, which include some well locations and logs. Recognizing that bedrock also contained significant amounts of groundwater in fractures, he initiated a bedrock lineament study for the state. These maps are also at town hall.

https://sandiego.bibliocommons.com/v2/search?query=%22Cotton%2C+John+E.+++%22&searchType=author

GROUND-WATER RESOURCES IN NEW HAMPSHIRE: STRATIFIED-DRIFT AQUIFERS

By Laura Medalie and Richard Bridge Moore 1995

U.S. GEOLOGICAL SURVEY
Water-Resources Investigations Report 95-4100
https://pubs.er.usgs.gov/publication/wri944083 (with plates/maps)

Foreword

New Hampshire's scenic landscape, from the peaks of the White Mountains to the sands of its beaches, was formed as a result of geologic processes over hundreds of millions of years. In relatively recent geologic history, advancing glaciers rounded the domes of the mountain summits, carved deep ravines, such as the famous Tuckerman Ravine on Mount Washington, and scoured the broad valleys common in the southern sections of the "Notches"-Crawford, Franconia, Evans, Pinkham, and Zealand. A testament to the tremendous scouring power of the glaciers is the widespread sand and gravel deposits in the valleys, where fragments of bedrock were transported and dropped by glacial meltwater. Today, these deposits, known as stratified drift, form major aquifer systems, holding one of New Hampshire's most valuable resources—ground water.

Assisting States in evaluating their water resources is a major part of the mission of the U.S. Geological Survey (USGS). A program of cooperative water-resources data collection between the State of New Hampshire and the USGS was instituted in 1903 to measure streamflows in the White Mountains. Today, the cooperative program encompasses a broad range of data collection and investigative studies involving the State's surface- and ground-water resources.

In 1983, the New Hampshire Legislature enacted Chapters 361 and 402 of the State Statutes, which authorized development of the New Hampshire Water Resources Management Plan and an intensive assessment of the State's ground-water resources. Following development of the Plan, in 1985 Governor John Sununu signed Chapter 77, which provided $2 million to fund the State's share of a **10-year-long ground-water-assessment program to be performed by the USGS in cooperation with** the New Hampshire Department of Environmental Services (**NHDES**). The **goals** of this program were to **(1)** determine the extent and hydrologic characteristics of stratified-drift aquifers, **(2)** assess potential water-yielding capabilities of selected aquifers, and **(3)** define general quality of water in the major aquifers. **After extensive data collection and analysis, results of these investigations are being published in a series of technical reports for the 13 study areas that cover the entire State**. Each report includes a set of **map plates** showing aquifer locations and important aquifer characteristics in addition to written text. These technical reports are directed primarily toward planners, engineers, and scientists who are engaged in ground-water resources development and management.

Reliable and comprehensive information about aquifers benefits all citizens by contributing towards informed decisions concerning water resources. By increasing knowledge and awareness about New Hampshire's ground-water resources, we seek to encourage and support their responsible use and management.

Robert M. Hirsch, Chief Hydrologist
United States Geological Survey

Robert W. Varney, Commissioner
New Hampshire Department of Environmental Services

Annual Meeting Awards

Existing Descriptions and Proposed Draft Language

Existing Language

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QUALIFICATIONS

The recipient should be a person who lives in and has made a major voluntary contribution to the environmental quality of the Lakes Region. Particular considerations include but are not limited to: environmental education; a key role initiating and carrying through an on-going project; emphasis on water quality; and intergovernmental cooperation, i.e., coordination between municipalities or between state and local governments.

PLAQUE INSCRIPTION

Given Annually By The Lakes Region Planning Commission

In Memory of B. Kimball Ayers, Jr.

For Outstanding Contributions To The Lakes Region Environment

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DRAFT Language

The Ayers–Cotton Environmental Service Award

Inaugural Award 2022

Given in honor of the late **B. KIMBALL AYERS, JR.** of Moultonborough and **JOHN E. COTTON** of Andover, the Lakes Region Planning Commission created the Ayers–Cotton inaugural award for 2022 to recognize an individual who, in the tradition of these two past and present stewards of the environment and of public service, has faithfully and persistently worked to maintain and improve the environmental quality of the Lakes Region in New Hampshire.

QUALIFICATIONS

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PLAQUE INSCRIPTION

Given Annually By The Lakes Region Planning Commission In Honor Of

B. Kimball Ayers, Jr. AND **John E. Cotton**

For Outstanding Environmental Stewardship of and Public Service to the Lakes Region Environment

---

Award of Excellence

Since 1995

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Given By Chairman Wayne Crowley

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Lakes Region Planning Commission

ANNUAL AWARD NOMINATION FORM

Nominating Period: January 1 – March 1, 2022

NOMINATION FOR Ayers–Cotton Environmental Service Award

DESCRIPTION

GIVEN IN HONOR OF THE LATE **B. KIMBALL AYERS, JR.** OF MOULTONBOROUGH AND **JOHN E. COTTON** OF ANDOVER, the Lakes Region Planning Commission created the Ayers–Cotton inaugural award for 2022 to recognize an individual who, in the tradition of these two past and present stewards of the environment and of public service, has faithfully and persistently worked to maintain and improve the environmental quality of the Lakes Region in New Hampshire.

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SUBMITTED BY YOUR NAME _____ EMAIL _____

AFFILIATION _____ PHONE _____

NOMINEE INFO	
Name:	Home Phone:
Occupation:	Business Phone:
Address:	

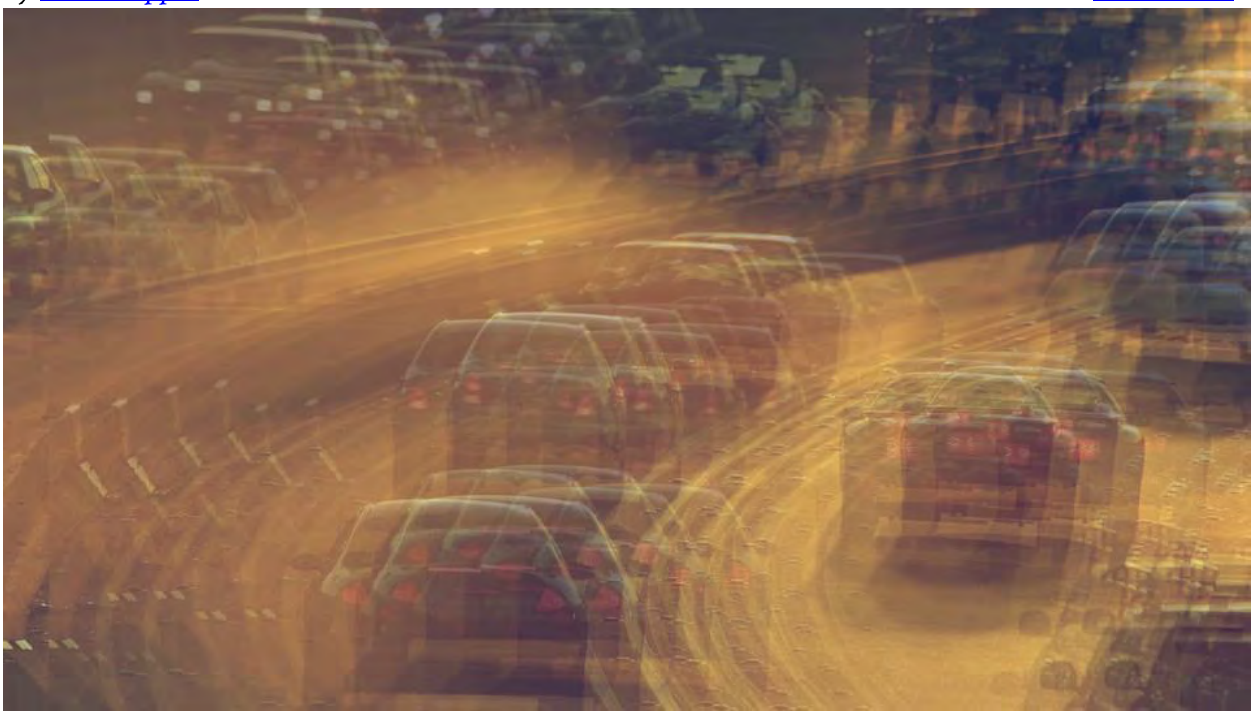
NOTEWORTHY ACHIEVEMENTS BY THE NOMINEE	(Please describe) Add additional sheets if necessary.

REFERENCES	(List names, addresses and phone numbers)

The Deadly Myth That Human Error Causes Most Car Crashes

Every year thousands of Americans die on the roads. Individuals take the blame for systemic problems.

By David Zipper Read online



David McNew/Getty; The Atlantic
November 26, 2021

About the author: David Zipper is a Visiting Fellow at the Harvard Kennedy School's Taubman Center for State and Local Government. He writes frequently about the future of urban mobility and technology.

More than 20,000 people died on American roadways from January to June, the highest total for the first half of any year since 2006. U.S. road fatalities have risen by more than 10 percent over the past decade, even as they have fallen across most of the developed world. In the European Union, whose population is one-third larger than America's, traffic deaths dropped by 36 percent between 2010 and 2020, to 18,800. That downward trend is no accident: European regulators have pushed carmakers to build vehicles that are safer for pedestrians and cyclists, and governments regularly adjust road designs after a crash to reduce the likelihood of recurrence.

But in the United States, the responsibility for road safety largely falls on the individual sitting behind the wheel, or riding a bike, or crossing the street. American transportation departments,

law-enforcement agencies, and news outlets frequently maintain that most crashes—indeed, 94 percent of them, according to the most widely circulated statistic—are solely due to human error. Blaming the bad decisions of road users implies that nobody else could have prevented them. That enables car companies to deflect attention from their decisions to add heft and height to the SUVs and trucks that make up an ever-larger portion of vehicle sales, and it allows traffic engineers to escape scrutiny for dangerous street designs.

Read: The absurd primacy of the automobile in American life

The recently passed infrastructure bill will encourage some safety improvements, including technology to prevent drunk people from operating a car and better crash tests to address risk to people outside a vehicle. Yet even as the federal government prepares to shovel out hundreds of billions of dollars for roadwork, Americans' fundamental misconception of traffic deaths as merely a profusion of individual mistakes will go largely uncorrected.

In 2015, the National Highway Traffic Safety Administration, a branch of the U.S. Department of Transportation, published a two-page memo declaring that "the critical reason, which is the last event in the crash causal chain, was assigned to the driver in 94% of the crashes." The memo, which was based on the NHTSA's own analysis of crashes, then offered a key caveat: "Although the critical reason is an important part of the description of events leading up to the crash, it is not intended to be interpreted as the cause of the crash."

To understand what the NHTSA was trying to say, imagine the following scenario: It's a foggy day, and the driver of an SUV is traveling along a road at the posted speed limit of 40 miles per hour. The limit then drops to 25 as the road approaches a town—but the road's lanes do not narrow (which would naturally compel a driver to apply the brakes), and the lone sign announcing the lower speed limit is partially obstructed. Oblivious to the change, the driver keeps traveling at 40. As he enters the town, a pedestrian crosses the road at an intersection without a stoplight. The driver strikes the pedestrian.

Read: The pedestrian-death crisis came to my neighborhood

By the federal government's definition, the "critical reason" for this hypothetical crash—the last event in the causal chain—is the error made by the driver who was speeding at the time of the collision. Almost certainly, the police will hold him responsible. But that overlooks many other factors: The foggy weather obscured the driver's vision; flawed traffic engineering failed to compel him to slow down as he approached the intersection; the SUV's weight made the force of the impact much greater than a sedan's would have been.

The authors of the 2015 NHTSA report were aware of such contributing factors. But their disclaimer that the "critical reason" for a crash is not the same as the "cause" has been largely

ignored. Even a page on the agency's own website whittles the message down to "94% of serious crashes are due to human error."

Seeking to find a single cause for a crash is a fundamentally flawed approach to road safety, but it underpins much of American traffic enforcement and crash prevention. After a collision, police file a report, noting who violated traffic laws and generally ignoring factors like road and vehicle design. Insurance companies, too, are structured to hold someone accountable. Drivers aren't the only ones who face such judgments. Following a crash, a pedestrian might be blamed for crossing a street where there is no crosswalk (even if the nearest one is a quarter mile away), and a cyclist might be cited for not wearing a helmet (although a protected bike lane would have prevented the crash entirely). News stories reinforce these narratives, with stories limited to the driver who was speeding or the pedestrian who crossed against the light.

Indeed, journalists have disseminated the misleading 94 percent line on influential platforms including *The Wall Street Journal*, *ABC News*, and *The Washington Post*. Research institutions such as the University of Michigan and the University of Idaho have done it too. Even former Transportation Secretary Elaine Chao has helped sow confusion, as have transportation departments in states such as Illinois, Utah, and Texas.

"The 94 percent line is a repeated reference at almost every state [department of transportation] conference I've ever attended," Jennifer Homendy, the chair of the National Transportation Safety Board, told me. When the Michigan DOT spokesman Jeff Cranson speculated in a 2019 podcast that human error is actually responsible for more than 95 percent of crashes, the Michigan State University engineering professor Timothy Gates responded, "Yeah, I would agree with that, there's very few crashes caused by a vehicle defect or road defect, a lot of it really is human error." That's a convenient perspective for engineers designing vehicles and roads.

And if the buck stops with the driver, automakers feel less pressure to make lifesaving safety features standard across their models—which many of them do not. Last year, *Consumer Reports* found that the average vehicle buyer would have to pay $2,500 for a blind-spot-detection system. Pedestrian-detection technology was standard on 13 of the 15 most popular vehicle models—but unavailable on one and part of a $16,000 optional package on another.

Read: Cars, pedestrians, and the struggle for the future of downtowns

With responsibility falling on those directly involved in a crash, it's unsurprising that so many highway-safety efforts revolve around education campaigns, assuming that if people were just more careful, we'd all be okay. Officials at the NHTSA and state DOTs pour millions of dollars into these programs, but their benefits seem modest at best. Officials "see their role as trying to cajole people on the roads to make smarter decisions," Seth LaJeunesse, a senior research associate at the University of North Carolina's Highway Safety Research Center, told me. "Wear a

seat belt, don't be drunk when driving, and signal appropriately. I think it's misguided. After all, who's going to address structural problems, if it's just people being stupid out there on the road?"

For now, the idea that human error causes nearly all crashes is a useful talking point for the makers of autonomous-vehicle technology, which supposedly will prevent such mistakes. Companies including General Motors, Google, and the start-up Aurora have touted the 94 percent statistic in promotional materials, press statements, and even SEC filings. But, as the Carnegie Mellon University engineering professor Phil Koopman has pointed out, autonomous systems will make their own errors on the road. He does not expect AVs to reduce crashes by more than 50 percent, even in a best-case scenario. And an all-autonomous driving future is still at least decades away, suggesting that AVs will not reverse the growing death toll on American roads for many years to come—if they ever do.

With the infrastructure bill now signed into law, the federal government has a chance to rethink its approach and messaging. Dumping the dangerous 94 percent myth would be a good start; deemphasizing pointless traffic-safety PR campaigns would help too. Encouraging state and local transportation agencies—not just law enforcement—to investigate crashes, which New York City is now doing, would be even better. What we need most is a reexamination of how carmakers, traffic engineers, and community members—as well as the traveling public—together bear responsibility for saving some of the thousands of lives lost annually on American roadways. Blaming human error alone is convenient, but it places all Americans in greater danger.

David Zipper is a Visiting Fellow at the Harvard Kennedy School's Taubman Center for State and Local Government. He writes frequently about the future of urban mobility and technology.

This article:

https://www.theatlantic.com/ideas/archive/2021/11/deadly-myth-human-error-causes-most-car-crashes/620808/?utm_source=pocket-newtab

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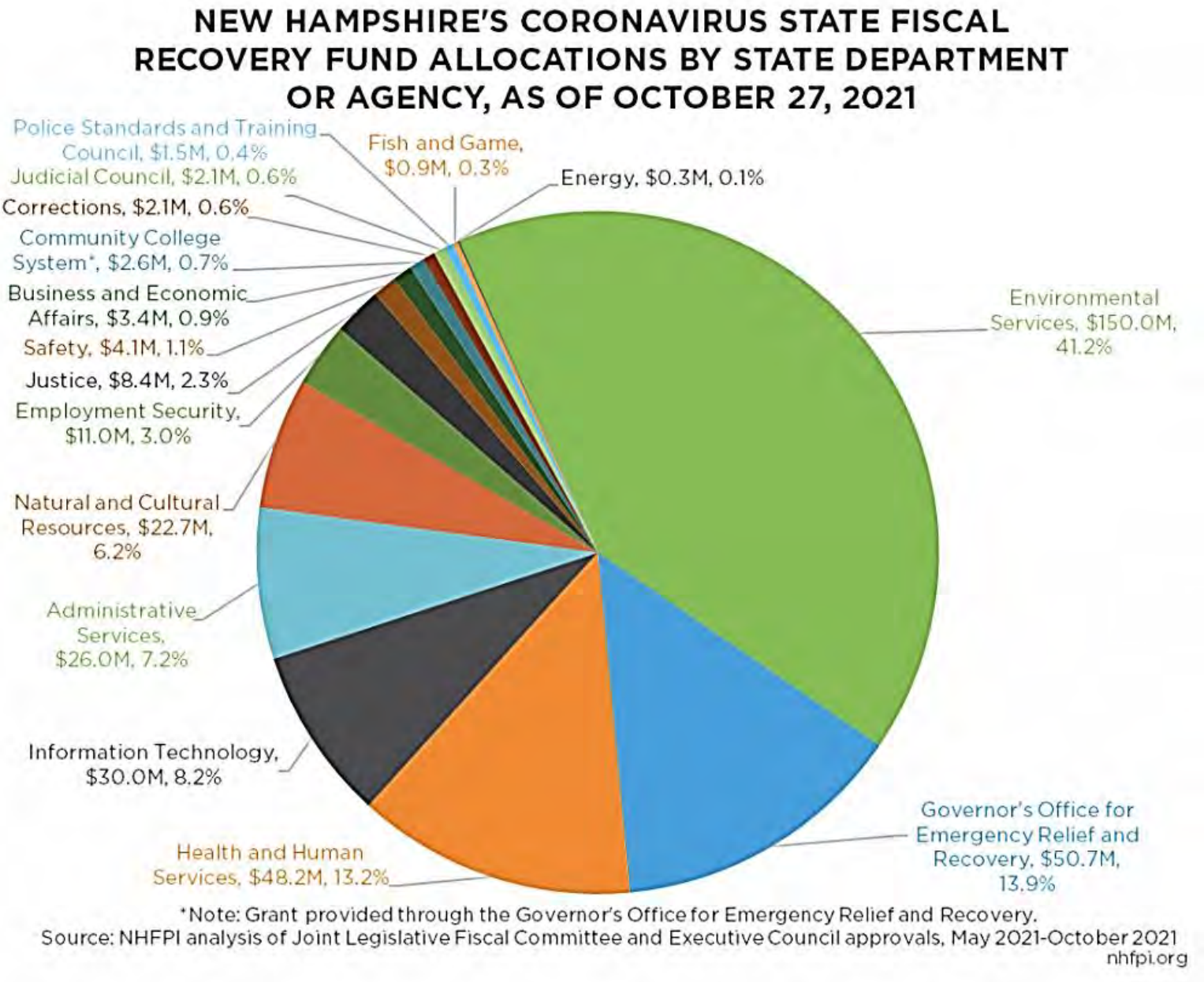
Environmental Services has received 40% of approved funding

November 23, 2021

Amanda Gokee-New Hampshire Bulletin



(Courtesy New Hampshire Fiscal Policy Institute)

With a third of the state's nearly $1 billion of federal pandemic money allocated, drinking water and wastewater projects have received the biggest slice of funding as of October, according to a recent analysis by the New Hampshire Fiscal Policy Institute.

Of the $360 million in American Rescue Plan Act funding approved so far, over 40 percent of it has gone to water infrastructure. That's $150 million for drinking water and wastewater projects, which will be managed by the Department of Environmental Services. The amount is more than three times what has gone to the Department of Health and Human Services, which had received about $48 million, or 13.2 percent of funds for managing the pandemic public health response, as of October.

Some $50 million given to DES was approved in June, with some of it going toward the creation of seven temporary full-time jobs. Those jobs include a business administrator, accountant, civil engineer, two environmentalist positions, a sanitary engineer and a program manager. The additional $100 million was approved in October. Of the $150 million, around $134 million is set aside for grants and $10 million for loans for communities.

While the Department of Environmental Services has received the most money of any department, it's still a fraction of the overall cost of upgrading and replacing water infrastructure in the state – which the department estimates would total roughly $1 billion. The state has been urging municipalities to apply for the funding, which has to be used by the end of 2026.

There are a wide range of water projects that are eligible, like replacing lead lines, installing new systems, or removing contaminants from drinking water.

The institute's analysis includes all funding approved by the Joint Legislative Fiscal Committee and the Executive Council through Oct. 27. It excludes contracts that were approved by the Joint Legislative Fiscal Committee last Friday – including $22.5 million to the Department of Health and Human Services for funding for vaccination efforts.

AMANDA GOKEE

Amanda Gokee is the New Hampshire Bulletin's energy and environment reporter. She previously reported on these issues at VTDigger. Amanda grew up in Vermont and is a graduate of Harvard University. She received her master's degree in liberal studies, with a concentration in creative writing, from Dartmouth College. Her work has also appeared in the LA Review of Books and the Valley News.

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News

The Bipartisan Infrastructure Law Will Deliver for New Hampshire

President Biden and Vice President Harris's Bipartisan Infrastructure Law is the largest long-term investment in our infrastructure and competitiveness in nearly a century. **The need for action in New Hampshire is clear, and recently released state-level data demonstrates that the Bipartisan Infrastructure Law will deliver for New Hampshire**. For decades, infrastructure in New Hampshire has suffered from a systemic lack of investment. In fact, the American Society of Civil Engineers gave New Hampshire a C- on its infrastructure report card. The historic Bipartisan Infrastructure Law will make life better for hundreds of thousands of New Hampshire residents, create a generation of good-paying union jobs and economic growth, and position the United States to win the 21st century.

Specifically, with regard to transportation, the Bipartisan Infrastructure Law will:

Repair and rebuild our roads and bridges with a focus on climate change mitigation, resilience, equity, and safety for all users, including cyclists and pedestrians. In New Hampshire there are 215 bridges and over 698 miles of highway in poor condition. Since 2011, commute times have increased by 5.9% in New Hampshire, and on average, each driver pays $476 per year in costs due to driving on roads in need of repair. The Bipartisan Infrastructure Law is the single largest dedicated bridge investment since the construction of the interstate highway system. **Based on formula funding alone, New Hampshire would expect to receive approximately $1.4 billion over five years in Federal highway formula funding for highways and bridges**. On an average annual basis, this is about 28.3% more than the State's Federal-aid highway formula funding under current law (1). New Hampshire can also compete for the $12.5 billion Bridge Investment Program for economically significant bridges and $15 billion of national funding in the law dedicated to megaprojects that will deliver substantial economic benefits to communities. New Hampshire can also expect to receive approximately $27 million over five years in formula funding to reduce transportation-related emissions, in addition to about $30 million over five years to increase the resilience of its transportation system (2). States may also apply federal aid dollars towards climate resilience and safety projects.

Improve the safety of our transportation system. The Bipartisan Infrastructure Law invests $13 billion over the Fixing America's Surface Transportation (FAST) Act levels directly into improving roadway safety. Over five years, New Hampshire will receive approximately $15 million in 402 formula funding for highway safety traffic programs, which help states to improve driver behavior and reduce deaths and injuries from motor vehicle-related crashes. On an average annual basis, this represents about a 29% increase over FAST Act levels (3). Local and tribal governments in New Hampshire will also be eligible to compete for $6

billion in funding for a new **Safe Streets for All program** which will provide funding directly to these entities to support their efforts to advance "vision zero" plans and other improvements to reduce crashes and fatalities, especially for cyclists and pedestrians. In addition, New Hampshire can expect to receive approximately $9.9 million over five years in funding to augment their commercial motor vehicle (CMV) safety efforts to reduce CMV crashes through the Federal Motor Carrier Safety Administration's Motor Carrier Safety Assistance Program (MCSAP) formula grant. This represents about a 53% increase in funding compared to FAST Act levels (4). New Hampshire will be able to apply for funds to modernize data collection systems to collect near real time data on all reported crashes, including fatal ones, to enhance safety and to allow the Department to understand and address trends as they are identified.

Improve healthy, sustainable transportation options for millions of Americans. New Hampshirites who take public transportation spend an extra 114.9% of their time commuting and non-White households are 2.1 times more likely to commute via public transportation. 32.1% of transit vehicles in the state are past useful life. **Based on formula funding alone, New Hampshire would expect to receive about $126 million over five years under the Bipartisan Infrastructure Law to improve public transportation options across the state (5). In the first year, this represents about a 40% increase over 2021 FAST Act formula transit funding levels.**

Build a network of EV chargers to facilitate long-distance travel and provide convenient charging options. The U.S. market share of plug-in electric vehicle (EV) sales is only one-third the size of the Chinese EV market – in 2020, plug-in electric vehicles made up only 2.3% of new car sales in the U.S., compared to 6.2% in China. The President believes that must change. The law invests $7.5 billion to build out the first-ever national network of EV chargers in the United States and is a critical element in the Biden-Harris Administration's plan to accelerate the adoption of EVs to address the climate crisis and support domestic manufacturing jobs. **Under the Bipartisan Infrastructure Law, New Hampshire would expect to receive about $17 million over five years to support the expansion of an EV charging network in the state (6). New Hampshire will also have the opportunity to apply for grants out of the $2.5 billion available for EV charging.**

Modernize and expand passenger rail and improve freight rail efficiency and safety. The Bipartisan Infrastructure Law includes $66 billion above baseline to eliminate the Amtrak maintenance backlog, modernize the Northeast Corridor, and bring world-class rail service to areas outside the northeast and mid-Atlantic. Within these totals, $22 billion would be provided as grants to Amtrak, $24 billion as federal-state partnership grants for Northeast Corridor modernization, and $12 billion for partnership grants for intercity rail service, including high-speed rail. On top of this, New Hampshire will be eligible to compete for $5 billion for rail improvement and safety grants and $3 billion for grade crossing safety improvements.

Improve our nation's airports. The United States built modern aviation, but our airports lag far behind our competitors. **Under the Bipartisan Infrastructure Law, airports in New Hampshire would receive approximately $46 million for infrastructure development for airports over five years (7).** This funding will address airside and landside needs at airports, such as improving runways, taxiways and airport-owned towers, terminal development projects, and noise reduction projects. In addition, $5 billion in discretionary funding is available over five years for airport terminal development projects that address the aging infrastructure of our nation's airports, including projects that expand accessibility for persons with disabilities, improve access for historically disadvantaged populations, improve energy efficiency, and improve airfield safety.

State and local governments can look forward to these new & expanded competitive grant programs in the Bipartisan Infrastructure Law (BIL) anticipated to launch over the course of the next year:

- **Safe Streets for All ($6B, new)** – This program will provide funding directly to local and tribal governments to support their efforts to advance "vision zero" plans and other improvements to reduce crashes and fatalities, especially for cyclists and pedestrians.
- **Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grants ($15B, expanded)** – RAISE grants support surface transportation projects of local and/or regional significance.
- **Infrastructure for Rebuilding America (INFRA) Grants ($14B, expanded)** – INFRA grants will offer needed aid to freight infrastructure by providing funding to state and local government for projects of regional or national significance. The BIL also raises the cap on multimodal projects to 30% of program funds.
- **Federal Transit Administration (FTA) Low and No Emission Bus Programs ($5.6B, expanded)** – BIL expands this competitive program which provides funding to state and local governmental authorities for the purchase or lease of zero-emission and low-emission transit buses as well as acquisition, construction, and leasing of required supporting facilities.
- **FTA Buses + Bus Facilities Competitive Program ($2.0B, expanded)** – This program provides competitive funding to states and direct recipients to replace, rehabilitate, and purchase buses and related equipment and to construct bus-related facilities including technological changes or innovations to modify low or no emission vehicles or facilities.
- **Capital Investment Grants (CIG) Program ($23B, expanded)** – The BIL guarantees $8 billion, and authorizes $15 billion more in future appropriations, to invest in new high-capacity transit projects communities choose to build.
- **Federal Aviation Administration (FAA) Terminal Program ($5B, new)** – This discretionary grant program will provide funding for airport terminal development and other landside projects.
- **MEGA Projects ($15B, new)** – This new National Infrastructure Project Assistance grant program will support multi-modal, multi-jurisdictional projects of national or regional significance.
- **Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation (PROTECT) Program ($8.7B, new)** – PROTECT will provide $7.3 billion in formula funding to states and $1.4 billion in competitive grants to eligible entities to increase the resilience of our transportation system. This includes funding for evacuation routes, coastal resilience, making existing infrastructure more resilient, or efforts to move infrastructure to nearby locations not continuously impacted by extreme weather and natural disasters.
- **Port Infrastructure Development Program ($2.25B, expanded)** – BIL will increase investment in America's coastal ports and inland waterways, helping to improve the supply chain and enhancing the resilience of our shipping industry. BIL overall doubles the level of investment in port infrastructure and waterways, helping strengthen our supply chain and reduce pollution.
- **5307 Ferry Program ($150M, existing)** – BIL retains the $30 million per year passenger ferry program for ferries that serve urbanized areas.
- **Electric or Low Emitting Ferry Program ($500M, new)** – This competitive grant program will support the transition of passenger ferries to low or zero emission technologies.

- **Rural Ferry Program ($2B - new)** – This competitive grant program will ensure that basic essential ferry service continues to be provided to rural areas by providing funds to States to support this service.
- **Federal Highway Administration (FHWA) competitive grants for nationally significant bridges and other bridges ($12.5B, new)** – This new competitive grant program will assist state, local, federal, and tribal entities in rehabilitating or replacing bridges, including culverts. Large projects and bundling of smaller bridge projects will be eligible for funding.
- **FTA All Station Accessibility Program ($1.75B, new)** – This competitive grant program will provide funding to legacy transit and commuter rail authorities to upgrade existing stations to meet or exceed accessibility standards under the Americans with Disabilities Act.
- **Charging and fueling infrastructure discretionary grants (Up to $2.5B, new)** – This discretionary grant program will provide up to $2.5 billion in funding to provide convenient charging where people live, work, and shop.
- **Reconnecting Communities Pilot Program ($1B, new)** – This new competitive program will provide dedicated funding to state, local, MPO, and tribal governments for planning, design, demolition, and reconstruction of street grids, parks, or other infrastructure.
- **FHWA Nationally Significant Federal Lands and Tribal Projects ($1.5B, expanded)** – This discretionary program provides funding for the construction, reconstruction, and rehabilitation of nationally-significant projects within, adjacent to, or accessing Federal and tribal lands. BIL amends this program to allow smaller projects to qualify for funding and allows 100% federal share for tribal projects.
- **Strengthening Mobility and Revolutionizing Transportation (SMART) Grant Program ($1B, new)** – The SMART Grant program will be a programmed competition that will deliver competitive grants to states, local governments, and tribes for projects that improve transportation safety and efficiency.
- **Rural Surface Transportation Grant Program ($2B, new)** – This new competitive grant program will improve and expand surface transportation infrastructure in rural areas, increasing connectivity, improving safety and reliability of the movement of people and freight, and generate regional economic growth.

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(1) These values are estimates and may change based on updated factor data each fiscal year.
(2) These values are estimates and may change based on updated factor data each fiscal year.
(3) These values are estimates based on the 2020 FHWA public road mileage data for FYs 2022-2026. Formula funding amounts in FYs 2023-2026 are subject to change as a result of the annual public road mile data certified by FHWA. The 402 amounts do not include redistribution of unawarded 405 balances per 23 USC § 405(a)(8) as that information is unknown at this time. The Bipartisan Infrastructure Law specifies NHTSA must distribute the supplemental appropriations for Section 402 in "equal amounts for each fiscal year 2022 through 2026". This analysis is subject to provisions of FY 2022-FY2026 appropriations acts.
(4) These values are estimates and may change based on updated factor data each fiscal year.
(5) Transit formula funding amounts are subject to changes resulting from the 2020 census or from annual transit service data reported to FTA's National Transit Database.
(6) These values are estimates and may change based on updated factor data each fiscal year.
(7) Precise allocations would change each year because the formulas use current passenger boarding and cargo data, and this estimate is based on 2019 data.

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Study: Lake Winnipesaukee worth over $17 billion

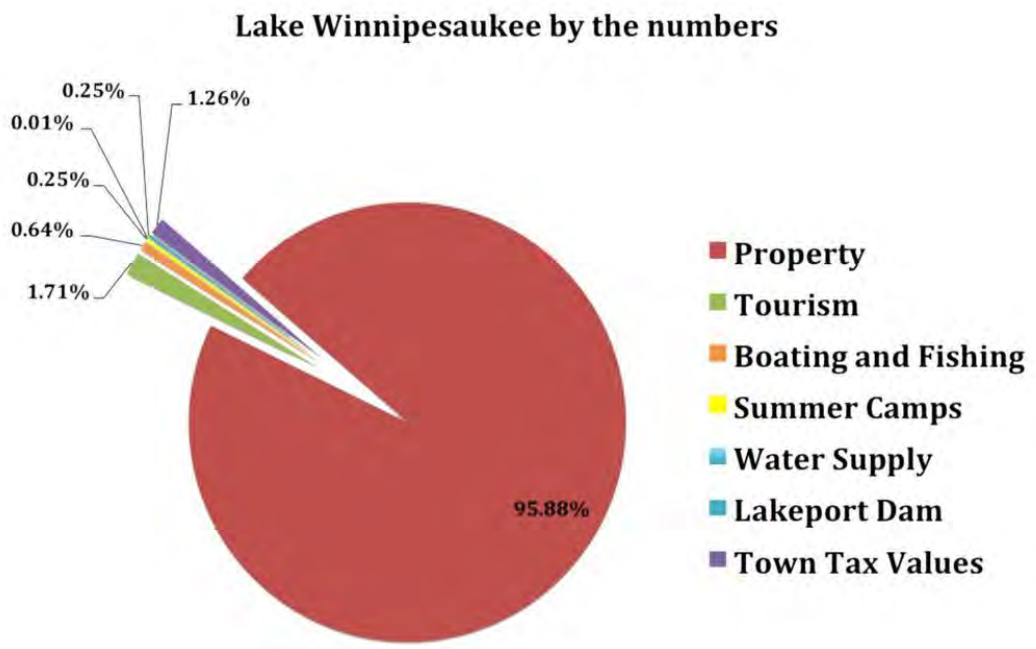
A report commissioned by the Lake Winnipesaukee Association shows true scale of lake's economic contribution

By JON DECKER, The Laconia Daily Sun Nov 19, 2021

The recent report found that Lake Winnipesaukee's $17.1 billion value comes from over $16 billion in real estate, $216.5 million in property town taxes, $294.1 million in tourism, $109.2 million in boating and fishing, $42.7 million from summer camps, $1.5 million from water supply revenue, and $42.2 million from the Lakeport Dam

Lake Winnipesaukee is the defining geographic feature in the Lakes Region, but how much is it worth? An environmental advocacy group now has an answer, and they are hoping to use that information to underscore the need to protect the lake.

An economic impact study has put the value of Lake Winnipesaukee at $17,163,764,533. The study was requested by the Lake Winnipesaukee Association and was written by the Policy Research Shop at Dartmouth College.



Jon Decker/Laconia Daily Sun

“We asked, has there ever been a real number attributed to the economic impact of the lake?” said Patricia Tarpey, executive director of the Lake Winnipesaukee Association. Tarpey explained that the association came up with the idea after discovering a similar study done for Lake Champlain. The association commissioned the report in February, and the PRS completed their work in June.

With a surface area of 72 square miles, Lake Winnipesaukee is the largest lake in the state. Its waters increase property values, attract tourism, create jobs, collect fishing and boating revenue, provide hydroelectric power, and of course, provide water to communities like Laconia.

Justin Slattery, executive director of the Belknap Economic Development Council, said he was not surprised at the $17 billion price tag.

“It really is one of the key economic drivers for the region,” Slattery said, “and frankly, for the state.”

According to the data, the largest contributor to Winnipesaukee’s worth was property values, which tallied in at over $16 billion. Coming in next was tourism revenue, which

brings in an estimated $249 million to the lake's value. Boating and fishing came in third, at over $109 million.

"I think that's an eye opener," Tarpey said regarding the total value. "The rest of the numbers combined are generating over $600 million to the local economy."

Though the report focuses on the lake's economic contributions, the association's goal is ecologically focused.

"In our work we are focused on protecting the ecology of the lake," Tarpey said. "When you think about it, the lake is what's really driving the economy of the area." Tarpey hopes the report can be a frame of reference for local municipalities when it comes to making policy decisions around Winnipesaukee.

One of Tarpey's and the association's primary concerns is water quality, which can be greatly impacted by zoning and policy.

"Ecologically, with a decline in water quality, we know that we have excessive nutrient loading coming into the lake. From the work we've done, we know that the pollutant, in part, is phosphorus," Tarpey said. According to Tarpey, the phosphorus levels of the lake are three times higher than what the natural background levels should be.

"That has repercussions on the lake's ecosystem," Tarpey explained. "Phosphorus is a nutrient. It feeds plant growth such as milfoil, algae, and cyanobacteria. There are certain strains that can release nerve and liver toxins."

Most of this phosphorus is the result of runoff from the lake's massive watershed.

"Winnipesaukee is a pretty big watershed, we have something like 369 square miles draining into 72 square miles of surface water. When you have a rain event, everything on the land in that washout ends up eventually in the lake. Brake dust, metals, salt. Everything off the road, it can be fertilizer on the lawns, anything on our roofs, it's all eventually coming in."

All of that runoff can result in algae blooms, harm to fish, dangerous bacteria, and other detrimental effects to the local ecology, and eventually, the economy.

Ecological hazards like runoff or pollution can be curbed by regulation such as stormwater management ordinances, which help control the amount of runoff in a given area.

“Any regulation that happens, either comes at the federal, state or local level. We have no real authority as an association,” Tarpey said. “The best we can do is help educate policy decision makers to implement better measures to protect this lake. And we have been working an awful lot with the local municipalities, they get it, they know it’s the golden goose.”

Slattery expressed enthusiasm for the report.

“I look forward to reviewing it and digging into it,” Slattery said. “We’re always seeking knowledge about our demographics in the region and how we address challenges.”

To read a copy of the 20-page report, visit **winnipesaukee.org**.

Outdoor industry a ‘significant driver’ of New Hampshire’s economy

But despite jumps in participation, job loss during Covid topped 20%

November 16, 2021
David Brooks-Concord Monitor

Only eight other states got a larger share of their GDP from the outdoor industry in 2020.

The pandemic clobbered certain parts of the outdoor recreation industry in 2020, cutting its employment in New Hampshire by one-fifth, but even so, the industry contributed more to the economy of the Granite State than in most other states in the country.

That’s one conclusion from a U.S. Bureau of Economic Analysis study. It said the outdoor recreation industry – which it considers everything from amusement parks and outdoor concerts to fishing trips and RV’ing – contributed $2.2 billion

New Hampshire's economy, about 2.6 percent of the gross domestic product in 2020, and employed over 26,500 people.

Only eight other states got a larger share of their GDP from the outdoor industry. Among those were Maine, where the tally was 3.3 percent, and Vermont, whose 3.7 percent was topped only by Hawaii and Montana.

Areas that boomed in New Hampshire in 2020 were those that could be enjoyed by individuals even while social distancing. It was led by boating and fishing, which rose a whopping 41 percent, and bicycling saw a hefty 14 percent increase. Camping in a RV saw a 9 percent increase and off-road riding a 5 percent boost.

"Noteworthy is the productive output of the RV, boating, and biking segments, which are likely harbingers of 2021 numbers. Going forward, the New Hampshire outdoor industry is mobilized and well-positioned to improve its meaningful impact through workforce initiatives, community development, and making the outdoors accessible and welcoming to all," said Tyler Ray of the industry group Granite Outdoor Alliance.

"Despite the global pandemic, New Hampshire's outdoor recreation employers were still significant drivers of the state's economy last year," said BEA Commissioner Taylor Caswell.

Presumably because many of the increased activities require little or no interaction with a business, the number of jobs related to outdoor activities in New Hampshire fell sharply, declining more than 41 other states. Outdoor employment was down 20.7 percent in 2020, according to federal data, compared to a national decline of 17.1 percent. Vermont (26 percent) and Maine (24 percent) saw even sharper declines.

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CATEGORIES: NEWS, RESTAURANTS, RETAIL & TOURISM

The Infrastructure Investment and Jobs Act will Deliver for New Hampshire

President Biden and Vice President Harris support the Senate's passage of the Infrastructure Investment and Jobs Act, the largest long-term investment in our infrastructure and competitiveness in nearly a century. **The need for action in New Hampshire is clear and recently released state-level data demonstrates that the Infrastructure Investment and Jobs Act will deliver for New Hampshire**. For decades, infrastructure in New Hampshire has suffered from a systemic lack of investment. In fact, the American Society of Civil Engineers gave New Hampshire a **C- grade** on its infrastructure report card. The historic Infrastructure Investment and Jobs Act will make life better for hundreds of thousands of New Hampshire residents, create a generation of good-paying union jobs and economic growth, and position the United States to win the 21st century. Specifically, the Infrastructure Investment and Jobs Act will:

- **Repair and rebuild our roads and bridges with a focus on climate change mitigation, resilience, equity, and safety for all users, including cyclists and pedestrians.** In New Hampshire there are 215 bridges and over 698 miles of highway in poor condition. Since 2011, commute times have increased by 5.9% in New Hampshire, and on average, each driver pays $476 per year in costs due to driving on roads in need of repair. The Infrastructure Investment and Jobs Act is the single largest dedicated bridge investment since the construction of the interstate highway system. **Based on formula funding alone, New Hampshire would expect to receive $1.1 billion for federal-aid highway apportioned programs and $225 million for bridge replacement and repairs under the Infrastructure Investment and Jobs Act over five years[1].** New Hampshire can also compete for the $12.5 billion Bridge Investment Program for economically significant bridges and nearly $16 billion of national funding in the bill dedicated for major projects that will deliver substantial economic benefits to communities.

- **Improve healthy, sustainable transportation options for millions of Americans.** Residents of New Hampshire who take public transportation spend an extra 114.9% of their time commuting and non-White households are 2.1 times more likely to commute via public transportation. 32% of transit vehicles in the state are past useful life. **Based on formula funding alone, New Hampshire would expect to receive $125 million over five years under the Infrastructure Investment and Jobs Act to improve public transportation options across the state[2].**

- **Build a network of EV chargers to facilitate long-distance travel and provide convenient charging options.** The U.S. market share of plug-in electric vehicle (EV) sales is only one-third the size of the Chinese EV market. The President believes that must

[1] These values are estimates and may change based on updated factor data each fiscal year.
[2] Transit formula funding amounts are subject to changes resulting from the 2020 census or from annual transit service data reported to FTA's National Transit Database.

change. The bill invests $7.5 billion to build out the first-ever national network of EV chargers in the United States and is a critical element in the Biden-Harris Administration's plan to accelerate the adoption of EVs to address the climate crisis and support domestic manufacturing jobs. **Under the Infrastructure Investment and Jobs Act, New Hampshire would expect to receive $17 million over five years to support the expansion of an EV charging network in the state[3]. New Hampshire will also have the opportunity to apply for the $2.5 billion in grant funding dedicated to EV charging in the bill.**

- **Help connect every American to reliable high-speed internet.** Broadband internet is necessary for Americans to do their jobs, to participate equally in school learning, health care, and to stay connected. Yet 10% of New Hampshire households do not have an internet subscription, and 3% of people in New Hampshire live in areas where, under the FCC's benchmark, there is no broadband infrastructure. **Under the Infrastructure Investment and Jobs Act, New Hampshire will receive a minimum allocation of $100 million to help provide broadband coverage across the state, including providing access to the at least 42,800 people in New Hampshire who currently lack it. And, under the Infrastructure Investment and Jobs Act, 209,000 or 15% of people in New Hampshire will be eligible for the Affordability Connectivity Benefit, which will help low-income families afford internet access.**

- **Prepare more of our infrastructure for the impacts of climate change, cyber attacks, and extreme weather events.** From 2010 to 2020, New Hampshire has experienced 5 extreme weather events, costing the state up to $500 million in damages. **Under the Infrastructure Investment and Jobs Act, based on historical formula funding levels, New Hampshire will expect to receive $5.6 million over five years to protect against wildfires and $12.4 million to protect against cyberattacks. Granite Staters will also benefit from the bill's historic $3.5 billion national investment in weatherization which will reduce energy costs for families.**

- **Deliver clean drinking water to every American and eliminate the nation's lead service lines and pipes.** Currently, up to 10 million American households and 400,000 schools and child care centers lack safe drinking water. **Under the Infrastructure Investment and Jobs Act, based on the traditional state revolving fund formula, New Hampshire will expect to receive $418 million over five years to improve water infrastructure across the state and ensure that clean, safe drinking water is a right in all communities.**

[3] These values are estimates and may change based on updated factor data each fiscal year.

- **Improve our nation's airports.** The United States built modern aviation, but our airports lag far behind our competitors. **Under the Infrastructure Investment and Jobs Act, airports in New Hampshire would receive approximately $45.6 million for infrastructure development for airports over five years[4].**

Over the coming days and weeks, we will expect to receive additional data on the impact of the Infrastructure Investment and Jobs Act in New Hampshire.

[4] Precise allocations would change each year because the formulas use current passenger boarding and cargo data, and this estimate is based on 2019 data.

How federal funds will bolster infrastructure in New Hampshire

BY: AMANDA GOKEE - NOVEMBER 11, 2021 11:17 AM

The bill would send an estimated $1.1 billion in federal aid to repair highways in the state. (Dave Cummings | New Hampshire Bulletin)

Another windfall of federal money is expected to start flowing into New Hampshire soon, as the bipartisan Infrastructure Investment and Jobs Act that passed Congress is now awaiting a signature from President Joe Biden to become law.

Here's what we know about how those funds would help bolster infrastructure and clean energy in New Hampshire.

The bill would send an estimated $1.1 billion in federal aid to repair highways in the state, and another $225 million for bridge repair and replacement over five years. That would help to address the 215 bridges and nearly 700 miles of highway that are in "poor condition" in the state, according to a fact sheet from the White House.

Around $125 million would go toward improving public transportation options in New Hampshire. Communities of color are more likely to take public transportation than white households, the White House found, and commuters using public transportation spend twice as much time in transit compared to those who drive.

Seventeen million dollars is earmarked to build out a network of charging stations for electric vehicles in the state. Transportation is currently the state's single largest source of carbon emissions that drive climate change.

The bill also includes $100 million to get broadband to New Hampshire households that still don't have access.

Around $5.6 million will help protect the state from wildfires, and $12.4 million will go toward bolstering the state's defense against cyberattacks.

New Hampshire would also get $418 million to improve water infrastructure, which would help address problems like lead pipes and contamination of drinking water.

Finally, the bill sets aside $45.6 million for infrastructure development at New Hampshire airports.

AMANDA GOKEE

Amanda Gokee is the New Hampshire Bulletin's energy and environment reporter. She previously reported on these issues at VTDigger. Amanda grew up in Vermont and is a graduate of Harvard University. She received her master's degree in liberal studies, with a concentration in creative writing, from Dartmouth College. Her work has also appeared in the LA Review of Books and the Valley News.

PLANNING MAGAZINE

7 Ways the New Infrastructure Package Invests in Planning

More than just a highway bill, the legislation is injecting billions of federal dollars into environmental justice, climate action, and local planning efforts. Here's how it all shakes out.

The infrastructure act dedicates significant funding to cash-strapped public transit agencies and programs that support more active transportation to help limit carbon emissions. Photo by georgeclerk/ E+ Collection/Getty Images.

Nov. 10, 2021

By BRENNA DONEGAN; LINDSAY R. NIEMAN

After months of negotiations in Congress, President Joe Biden signed the Infrastructure Investment and Jobs Act into law in November 5. The $1.2 trillion package, also known as the Bipartisan Infrastructure Framework (BIF), reauthorizes the five-year Fixing America's Surface Transportation Act (FAST Act) and funds a variety of local planning efforts that reflect recommendations from the American Planning Association's Surface Transportation Policy Guide.

"This is the culmination of years of advocacy work from planners and APA to reform and renew the current surface transportation law, which has more direct impact on local and regional planning than any other federal program," says Jason Jordan, APA's public affairs director.

As expected, the package puts substantial federal dollars — $110 billion — into highway, road, and bridge construction and repair. And while negotiations scaled back or cut some programs lacking bipartisan support, BIF maintains some historic planning investments, like first-of-its-kind funding for climate action. Significantly, it also builds greater local authority and gives more direct resources to city and regional planning organizations.

"With the reforms and investments contained in this landmark legislation, planners will have new tools to provide solutions for the future mobility, safety, equity, and resilience of the places and people they serve," says APA President Leo. R. Asuncion Jr., AICP.

Here are seven of the biggest planning takeaways:

1. FIRST-EVER CLIMATE PROVISIONS

This marks the first time that climate action funding is included in the surface transportation act. With a new $6.4 billion formula and grant funding program for carbon reduction, 65 percent of program funding will go directly to regions and localities.

BIF also fully funds several resiliency and mitigation programs, like the newly authorized Safeguarding Tomorrow through Ongoing Risk Mitigation (STORM) Act and the Federal Emergency Management Agency's Building Resilient Infrastructure and Communities (BRIC) program. Plus, the newly created Promoting Resilient Operations for Transformative, Efficient and Cost-saving Transportation (PROTECT) program provides $7.3 billion in funding for resilience and hazard mitigation and $1.4 billion in grants — with $140 million specifically set aside for planning.

2. PLANNING FOR SAFER STREETS

Transportation safety is getting both critical reforms and historically high investments. The safety programs focus specifically on planning, with $400 million for local Vision Zero planning, a new complete streets program, and the creation of a $5 billion Safe Streets and Roads for All safety planning program. The Safe Routes to School program — which encourages students to bike and walk by funding infrastructure improvements, safety education, and other tools — will also be codified and expanded.

3. JUSTICE AND EQUITY

As planners strive to right planning wrongs, they will now be supported with the newly created Reconnecting Communities program, which is aimed at tearing down highway infrastructure that bifurcated communities, particularly communities of color. The program will set aside $1 billion for revitalization work, including $150 million of dedicated planning and community engagement funding. BIF also requires new vulnerability assessments to ensure that planners focus resources and support on low-income and underserved communities.

4. TRANSIT'S BIGGEST INVESTMENT EVER

Transit agencies suffering from pandemic-induced revenue loss could see some relief. Along with reauthorizing existing programs in the surface transportation act for the next five years, the package dedicates $39 billion in new funding to modernize systems, improve accessibility for users with limited mobility, provide new transit options in communities, and add zero-emission vehicles to transit fleets, among other programs and provisions. It also boosts funding for Amtrak and rail projects nationwide. Overall, the White House says this is the federal government's largest investment in public transit to date: more than $89 billion.

5. ACTIVE TRANSPORTATION, TOO

A variety of major advances for planning that support walking and biking are also included. The package reforms the Transportation Alternatives Program (TAP), the primary federal source of funding for non-motorized surface transportation, with expanded local control, fewer state transfers, more flexibility for local matches, and a 60 percent increase in funding. And the new Active Transportation Infrastructure Investment Program will see $200 million a year in grants to better connect walking and biking routes with destinations and other transportation options.

6. EMERGING TECH AND CONNECTIVITY

With $5 billion for a new Electric Vehicle Formula Program and $2.5 billion from the Highway Trust Fund for a new competitive grant program, the package aims to create a broader national network of EV charging infrastructure.

It also addresses another connectivity issue: the digital divide. With around 19 million Americans still lacking broadband access, the pandemic has further underscored the importance of reliable, high-speed internet access. The legislation dedicates $65 billion to broadband infrastructure, with $60 million specifically set aside for digital equity plans.

7. EMPOWERING LOCAL PLANNERS

Metropolitan planning organizations will also see an influx of direct financial support, with a 32 percent increase in funding for transportation planning compared to 2020 levels. Smaller regions will now qualify for direct funding, and local planners will gain support for reducing single-occupancy vehicle use with a new $250 million Congestion Relief Program.

A slate of other programs and provisions provide additional support for municipal and regional projects, including $2 billion in grants for rural transportation efforts that increase connectivity, improve safety, and generate economic growth. MPOs will also be eligible for a new pilot program focused on accessibility and connectivity data, modeling, and engagement innovations, plus support to better align transportation, land use, and housing plans. Regional and local planners will also have access to a new $500 million grant program for smart cities technologies.

Brenna Donegan is APA's senior communications associate. Lindsay Nieman is APA's senior editor, digital strategy.

The Big Problem With Plastic

CR reveals where most of the plastic you throw away really ends up and explains what to do to limit its environmental harm

By Kevin Loria
September 08, 2021

884 SHARES

https://www.consumerreports.org/environment-sustainability/the-big-problem-with-plastic/

ILLUSTRATION: SPOOKY POOKA

Consider the amount of plastic you put into the trash or recycling on a typical day. There's the lid to your coffee cup, and perhaps a bag from a newspaper. There's the wrapper from a granola bar, a yogurt container, a salad clamshell, and the plentiful packaging from inside a box that arrived in the mail.

Many of these plastic items are useful and convenient, but they also come with a high environmental cost. In 2016, the U.S. generated more plastic trash than any other country—46.3 million tons of it, according to a 2020 study published in Science Advances. That's 287 pounds per person in a single year. By the time these disposable products are in your hands, they've already taken a toll on the planet: Plastics are mostly made from fossil fuels, in an energy-intensive process that emits greenhouse gases and creates often hazardous chemicals.

And then there's what happens when you throw them away.

If you're like most people, you probably assume that when you toss plastic into the recycling bin it will be processed and turned into something new.

MORE ON PLASTICS & RECYCLING

How to Quit Plastic
What's Gone Wrong With Plastic Recycling
How to Recycle Old Electronics
How to Eat Less Plastic
Most Plastic Products Contain Potentially Toxic Chemicals, Study Reveals

The truth is that only a fraction of plastic is actually recycled. According to the most recent data estimates available from the Environmental Protection Agency, just 8.7 percent of the plastic that was discarded in the U.S. in 2018 was recycled.

The popular perception that plastic is easily and widely recycled has been shaped by decades of carefully calculated messaging designed and paid for by the petroleum and gas companies that make most of that plastic in the first place, and the beverage companies that depend on plastic to bottle their products.

"Recycling is sold as a means of not worrying about the problem," says Judith Enck, a former regional administrator at the EPA, now a visiting professor at Bennington College in Vermont and president of Beyond Plastics, a group focused on ending plastics pollution. The companies paying for the ads that frame recycling as an easy solution to a potentially devastating environmental problem know that recycling cannot keep up with the flood of new plastic, Enck says.

One of four things happens to plastic after you're done with it. If it's not recycled—and it's usually not—it is landfilled, incinerated, or littered. The EPA estimates that in 2018, about 16 percent of U.S. plastic waste was incinerated. A relatively small amount was littered. Most of the rest ended up in landfills—including a lot of the plastic people dutifully put into recycling bins.

Over decades or even centuries, much of that littered and landfilled plastic breaks down into tiny particles known as microplastics, which contaminate our food, the air, and water. They also accumulate in our bodies, potentially increasing our risk of chronic inflammation and other ills.

Experts say that while cutting back on plastic use is a worthy individual goal (see "How to Quit Plastic"), the only way to stem the rising tide of plastic is for companies to make less of it and for recycling programs to be retooled so that more of what we throw away is actually turned into something useful.

There's little to suggest this will happen anytime soon. Plastic production is expected to more than double by 2050, and even if it doesn't, the plastic trash that people continue to throw away will still have to go somewhere.

Find out how to quit plastic with tips from CR on ways to reduce this kind of waste and its environmental impact.

The Truth About Plastic Recycling

Dedicated bins for plastic waste are a common sight, and plastic recycling is widely promoted. So why does only a fraction of the plastic we toss actually get recycled?

One reason is that most plastic isn't easily recyclable, says Jan Dell, a chemical engineer who heads up The Last Beach Cleanup, a nonprofit focused on plastic pollution. Plastic products are often made of mixtures of many chemicals, which can stymie recycling processes by making it harder to isolate a base material that can be recovered and reused.

Perhaps the most important reason is that there is very little financial incentive to recycle: It's far less expensive to manufacture most types of plastic from scratch than it is to recycle old plastic into something new. The least recyclable plastic products include many labeled with the numbers 3 through 7 in the recycling triangle, as well as the majority of plastic bags and packaging film.

Certain types of plastic, however, are economically viable and relatively easy to recycle, and even in high demand. These include PET plastic bottles, like the ones soda and water are sold in, and HDPE milk jugs (respectively labeled with a number 1 or 2 inside the recycling triangle). But just 29 percent of the plastic used in these jugs and bottles was recycled in 2018.

According to guidelines from the Federal Trade Commission, at least 60 percent of Americans should have access to a program that recycles a particular item before it can be labeled as recyclable without some language noting that access to recycling may be limited. But these guidelines are rarely followed, according to a 2020 report from Greenpeace. (The FTC did not respond to a request for comment.)

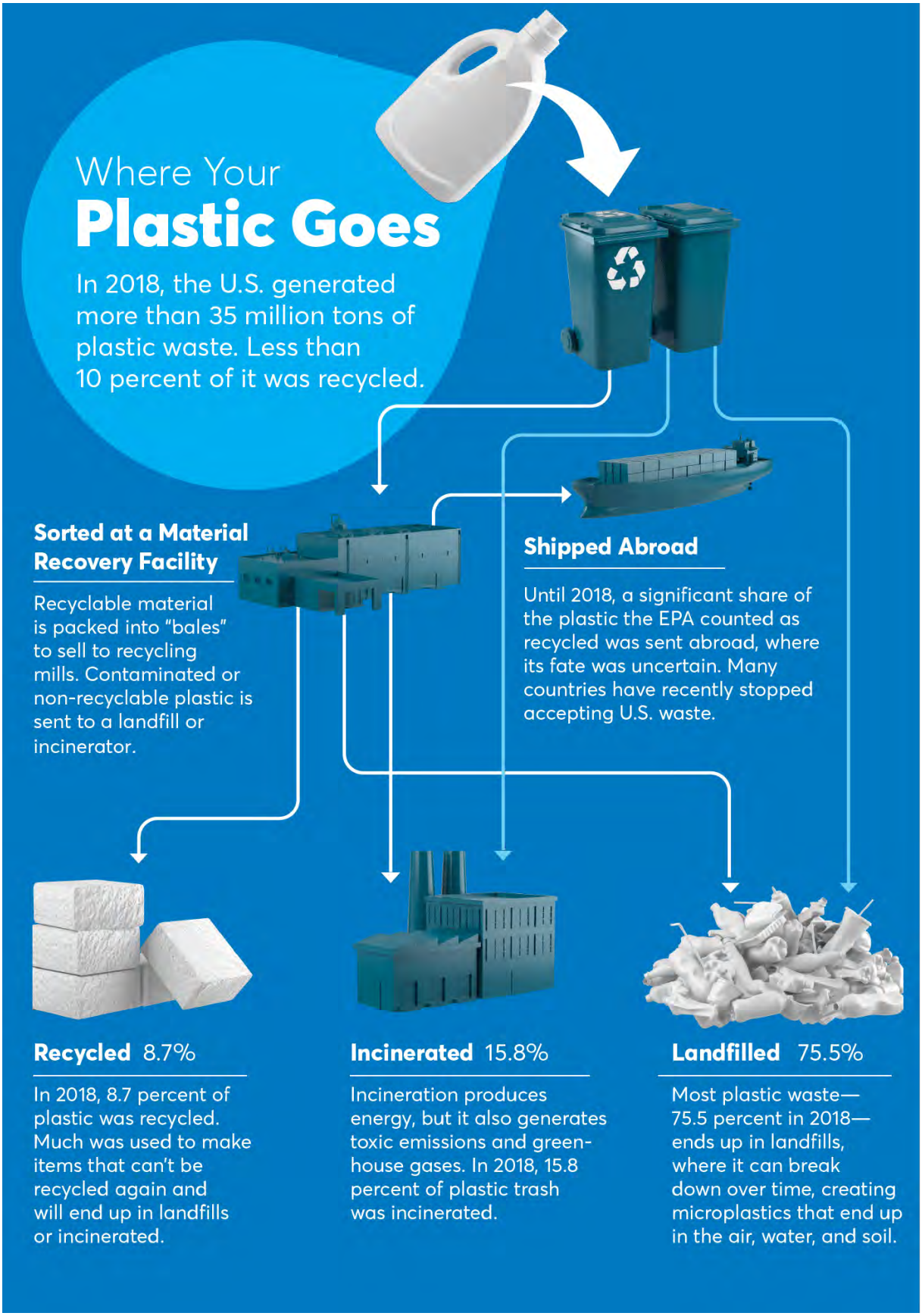
Only numbers 1 and 2 bottles and jugs are recycled consistently; labeling other items as "check locally" inside a recycling triangle is just greenwashing, Dell says—a way for a company to imply that something will be recycled when it will almost certainly end up in a landfill.

Well-intentioned consumers are also partly responsible for the low plastic recycling rate. "Wishcycling," or tossing every type of plastic into the recycling bin and hoping for the best, can

make separating out useful material more difficult and actually reduce the amount of plastic that is recycled, says Jeff Donlevy, the general manager at a California recycling facility who has been in the industry for more than 25 years. This can lead to recyclable plastic ending up in landfills and incinerators.

In theory, sorting plastics and depositing only readily recyclable types into the recycling bin would help fix this problem. (According to a May 2021 nationally representative survey of 2,079 U.S. adults by CR (PDF), 65 percent of Americans say they typically separate plastics for recycling.) But U.S. recycling trends have worked against this type of careful sorting. Many municipalities have switched to single-stream recycling, in which aluminum cans, glass bottles, plastic jugs, and paper and cardboard all get dumped into the same bin. That can make things easier for the consumer, but it also makes sorting out the recyclable plastic more difficult, so more ultimately ends up discarded rather than recycled, says Brandon Wright, vice president of communications for the National Waste & Recycling Association.

On the bright side, most discarded plastic bottles are collected and recycled in states that require people to pay a bottle deposit. But only 10 states currently have such laws.



Illustrations: Spooky Pooka

Burning Questions

Until 2018, the U.S. shipped as much as half of its plastic recycling abroad, mostly to China and Hong Kong (where it was not always recycled). Tired of dealing with contaminated plastic bales that were largely waste, China in 2018 stopped taking all but the most pristinely sorted plastic. Other countries quickly followed suit. With fewer offshore disposal options, more and more plastic is piling up in the U.S., where it is landfilled or routed to municipal solid waste incinerators that burn non-recyclable plastics along with other trash to generate electricity.

Because it generates power, incineration can sometimes be framed as a form of renewable energy or reuse (the EPA describes it as "combustion with energy recovery"). But it is not clean energy.

Incineration of plastic in these facilities has led to a slight increase in greenhouse gas emissions in recent years, according to EPA data. Burning plastic also creates dioxins and furans, two types of toxic chemicals that can spread through the air and contaminate food, water, and soil. Over time, inhaling these chemicals can increase cancer risk, according to Marilyn Howarth, MD, an occupational and environmental medicine physician at the University of Pennsylvania.

What's more, incinerators are often situated in poorer communities that already have a high burden of air pollution from sources such as heavy industry and transportation. Residents of these areas face health concerns, including cardiovascular disease, childhood asthma, exposure to carcinogenic pollutants, and preterm births, according to a 2019 report published by the New School's Tishman Environment and Design Center, with support from the Global Alliance for Incinerator Alternatives (GAIA). About 4.4 million people in the U.S. live within a 3-mile radius of an incinerator, according to that report.

The plastics industry has proposed alternatives to incinerators and landfills. One breaks down plastic into a type of fuel; others use a chemical process to separate plastic into its component chemicals, which could then be used to make new plastic products. But these alternatives are not likely to solve the plastic problem anytime soon.

One assessment of an advanced plastic-to-fuel recycling process, commissioned by a plastic bag company, found that in some cases it could emit more greenhouse gases than landfilling or an incineration process.

In a statement, the American Chemistry Council, an industry group representing plastics manufacturers, said it expected such facilities—which are still relatively new—to operate more efficiently over time. Experts say that recycling with a chemical process is not economically viable because making new, virgin plastic from oil and gas is still much cheaper. "It fundamentally doesn't work," Enck says.

A Cleaner Future?

From an environmental perspective, the biggest benefit of increasing the plastic recycling rate is not keeping plastic out of landfills or incinerators. “The value of recycling is displacing virgin production, because the amount of pollution generated when producing virgin materials is much greater than that generated when using recovered materials,” says Reid Lifset, associate director of industrial environmental management at the Yale School of the Environment.

“Consumers really can change the market. Plastic companies are looking into better recycling methods because it is such an important consumer issue.”

SHELIE MILLER, PHD, PROFESSOR AT THE UNIVERSITY OF MICHIGAN SCHOOL FOR ENVIRONMENT AND SUSTAINABILITY

Legislative changes and consumer pressure could certainly create more of a market for at least some of the plastic that is now going straight into incinerators and landfills, says Wright, of the National Waste & Recycling Association. A legal requirement or company commitment to use more recycled material in plastic products, including those made of less frequently recycled plastics, could create incentives for manufacturers to make more recyclable products and for recycling facilities to do a better job sorting, processing, and actually recycling that material.

For example, the high demand for the type 1 plastic used in PET beverage bottles is largely due to consumers pressuring beverage companies to improve recycling processes and lawmakers requiring them to use a certain percentage of recycled plastic in their products. A California law passed last year, for instance, requires beverage bottles to be made of 15 percent recycled plastic. That will increase to 25 percent by 2025 and 50 percent by 2030. Requirements like these “force manufacturers to change the makeup of their products, to use more recyclable plastic or more environmentally friendly materials,” says Shanika Whitehurst, associate director of product sustainability, research, and testing at CR.

“Consumers really can change and push a market,” says Shelie Miller, PhD, a professor at the University of Michigan School for Environment and Sustainability. “Plastic companies are actively looking into better recycling methods and how to design plastics to be more easily recyclable because they know this is such an important consumer issue.” The American Chemistry Council recently said it supports a national standard that would require all plastic packaging to contain at least 30 percent recyclable material by 2030.

Another part of the solution, according to Enck, Lifset, and others, is extended producer responsibility (EPR), which would require plastic makers and sellers to be responsible in some way for the life cycle of their products, including cleanup after they are sold. EPR usually involves producers either implementing collection programs themselves or funding local collection programs to ensure more products are recycled. An EPR system in British Columbia, for example, increased the share of plastic waste collected for recycling from 42 percent in 2018 to 52 percent in 2020.

In 2021, Maine became the first state in the U.S. to pass EPR legislation addressing packaging waste. The law will levy fees on companies that create or use packaging; fees will be lower for practices with less environmental impact, like using more recyclable materials. The fees will be used to fund local recycling efforts. Oregon passed an EPR law soon after Maine, and six other states have EPR bills in the works.

Enck says another worthy goal is eliminating single-use plastics, like plastic bags and polystyrene foam. But for such a change to have a positive impact, the items that replace them have to actually be reused—and often, says the University of Michigan's Miller. "Someone who goes to the grocery store and forgets to bring reusable bags and every time buys a new reusable bag is creating a more [harmful] single-use item," she says.

That suggests the real shift consumers need to make: More than just avoiding plastic, we need to evaluate our behavior and move away from unnecessary consumption and living a throwaway lifestyle. "If we're really honest, any solution will require us to analyze our own consumption to try to understand what we're consuming and why, and whether there are ways to reduce our individual consumption," Miller says. She acknowledges that's a tall order for a lot of people. It's much easier to say "I can consume anything I want. I'll just recycle it."

Editor's Note: This article also appeared in the October 2021 issue of Consumer Reports magazine.

Kevin Loria

I'm a science journalist who writes about health for Consumer Reports. I'm interested in finding the ways that people can transform their health for the better and in calling out the systems, companies, and policies that expose patients to unnecessary harm. As a dad, I spend most of my free time trying to keep up with a toddler, but I also enjoy exploring the outdoors whenever possible.