

UNITED STATES DISTRICT COURT
DISTRICT OF NEW HAMPSHIRE

Kevin Brown et al,

v.

Civil No. 16-cv-242-JL
Opinion No. 2023 DNH 156

Saint-Gobain Performance Plastics et al.

MEMORANDUM ORDER

The class action “predominance” and “commonality” requirements in [Federal Rule of Civil Procedure 23](#) are the primary focus of this motion, in which the plaintiffs seek to represent a class of property owners whose property and household water sources have purportedly been contaminated by the toxic emissions of a manufacturing facility in Merrimack, New Hampshire. The named plaintiffs assert claims for trespass, nuisance, negligence, and negligent failure to warn against two defendants: Saint-Gobain Performance Plastics Corporation, the owner and operator of the facility since 2000, and Gwenael Busnel, the facility’s general manager during the relevant time period.

The proposed class consists of property owners within two defined, contiguous areas surrounding the facility, who derive their water from two allegedly contaminated sources—private groundwater wells or the Merrimack Village District Water Works (MVDWW) municipal water system.¹ The plaintiffs alternatively propose two subclasses of property owners in the same locations who source their water from the private wells,

¹ Mot. for Class Certification (doc. no. [255-1](#)) at 26.

on one hand, or from the MVDWW system, on the other.² The defendants argue that class treatment is improper because the plaintiffs' claims present myriad individual factual and legal issues, which are not susceptible to class-wide proof.

The court has class action jurisdiction over this case under [28 U.S.C. § 1332\(d\)](#) (diversity). After reviewing the parties' submissions, determining the admissibility of challenged expert opinions, and hearing oral argument and live testimony, the court certifies the class as to liability issues under the trespass, negligence, and negligent failure to warn claims. Saint-Gobain's liability under these causes of action is predicated on predominantly common issues that can be resolved jointly across the class, including the defendants' actions in emitting toxic chemicals and their subsequent efforts to investigate, mitigate, and warn the potentially affected population of the emissions; the hazardous nature of the chemicals emitted; and the geographical scope and foreseeability of groundwater contamination.

² [Id.](#) at 27. The plaintiffs also moved to certify a class of individuals who were exposed to contaminated groundwater and are seeking ongoing medical monitoring. Medical monitoring has been characterized as a tort or remedy in which plaintiffs "seek to recover the anticipated costs of long-term diagnostic testing necessary to detect latent diseases that may develop as a result of tortious exposure." [In re: Nat'l Hockey League Players' Concussion Inj. Litig.](#), 327 F.R.D. 245, 259-60 (D. Minn. July 13, 2018). On March 9, 2022, the court certified questions to the Supreme Court of New Hampshire regarding (1) whether New Hampshire recognizes a cause of action or remedy for medical monitoring and (2) the applicable elements of or requirements for that claim. Doc. no. 364. The following year, on March 21, 2023, the Supreme Court "answer[ed] the first certified question in the negative and, consequently, [did] not address the second question." Doc. no. 432 at 5. The court accordingly mooted the plaintiffs' medical monitoring claims and denied the plaintiffs' class certification motion as to the proposed medical monitoring class. Doc. no. 433 at 1-2.

The court denies certification as to the nuisance claim, however, because it necessarily turns on individual assessments of the harm experienced by each putative class member, making class treatment of these issues unmanageable.

Finally, the court concludes that damages issues cannot be determined on a class-wide basis, since they vary based on factors including the extent of contamination attributable to Saint-Gobain in the groundwater sources for individual property owners, each individual's duration of residence at the relevant property, the effects and timing of mitigation efforts, and specific inconveniences and discomfort experienced by each class member. Thus, the trial will be bifurcated, with the first phase focused on determining the defendants' liability, and the second phase addressing damages.

I. Applicable legal standard

“The class action is ‘an exception to the usual rule that litigation is conducted by and on behalf of the individual named parties only.’” [Comcast Corp. v. Behrend](#), 569 U.S. 27, 33 (2013) (quoting [Califano v. Yamasaki](#), 442 U.S. 682, 700-01 (1979)). To obtain class certification, the plaintiffs must establish by a preponderance of the evidence that [Rule 23\(a\)](#)'s four prerequisites are satisfied. See [In re Nexium Antitrust Litig.](#), 777 F.3d 9, 17, 27 (1st Cir. 2015). “Once plaintiffs have made their initial showing, defendants have the burden of producing sufficient evidence to rebut the [plaintiffs'] showing.” [Id.](#) Specifically, the plaintiffs must show:

- (1) the [proposed] class is so numerous that joinder of all members is impracticable;
- (2) there are questions of law or fact common to the class;

(3) the claims or defenses of the representative parties are typical of the claims or defenses of the class; and

(4) the representative parties will fairly and adequately protect the interests of the class.

Fed. R. Civ. P. 23(a).

Where, as here, the plaintiffs move to certify the proposed class under [Rule 23\(b\)\(3\)](#), they must also satisfy the rule’s predominance and superiority requirements. This requires a showing that “questions of law or fact common to class members predominate over any questions affecting only individual members, and that a class action is superior to other available methods for fairly and efficiently adjudicating the controversy.” [Fed R. Civ. P. 23\(b\)\(3\)](#); see also [In re New Motor Vehicles Canadian Exp. Antitrust Litig.](#), 522 F.3d 6, 18 (1st Cir. 2008).

These rules “do[] not set forth a mere pleading standard. A party seeking class certification must affirmatively demonstrate his compliance with the Rule.” [Wal-Mart Stores, Inc. v. Dukes](#), 564 U.S. 338, 350 (2011). The court, in turn, must engage in a “rigorous analysis,” which may involve “prob[ing] behind the pleadings.” [Id.](#) (quoting [General Tel. Co. of Southwest v. Falcon](#), 457 U.S. 147, 160 (1982)); see also [In re Nexium](#), 777 F.3d at 18. The court may consider merits questions as part of the [Rule 23](#) analysis “to the extent—but only to the extent—that they are relevant to determining whether the [Rule 23](#) prerequisites for class certification are satisfied.” [Amgen Inc. v. Connecticut Ret. Plans & Tr. Funds](#), 568 U.S. 455, 466 (2013).

II. Background

The facts are drawn from the plaintiffs' complaint as well as the parties' briefs on the class certification motion and attached exhibits. Saint-Gobain has owned and operated a manufacturing facility in Merrimack, New Hampshire since 2000. Prior to 2000, Chemfab Corporation owned and operated the facility. As part of its manufacturing operations, the facility used ammonium perfluorooctonate (APFO), which is a derivative of perfluorooctanoic acid (PFOA). Both APFO and PFOA are part of a group of toxic substances known as PFAS.³ PFOA is water soluble and resistant to environmental degradation, enabling it to travel from the air, through the soil, and then into the groundwater.⁴

On March 4, 2016, the New Hampshire Department of Environmental Services issued a press release stating that, during the prior week, "Saint-Gobain notified NHDES that [PFOA] was detected at low levels . . . in samples taken from four water faucets within their Merrimack facility."⁵ The NHDES announced that it would be investigating MVDWW groundwater wells, which "cumulatively serve 25,000 customers in

³ The court refers to PFOA and PFAS collectively as PFOA throughout this Order, except when quoting other sources that refer to the substances differently. These shifts in nomenclature, where present, do not factor into the parties' arguments or affect the [Rule 23](#) analysis.

⁴ See Preliminary Air Soil and Water Modeling Technical Memorandum June 2017 – revised September 2018 ("Barr Report") (doc. no. [246-5](#)) at 11 ("PFOA does not readily degrade[,] "is deposited on the ground in proximity to the emission source[,] and is "mobile and migrate[s] as [a] solute[] in flowing groundwater"); [id.](#) at 14 ("[A]t some manufacturing facilities that make or use PFAS compounds, air emission and subsequent deposition on nearby land surfaces has been found to be a mechanism for PFOA to be transported to groundwater (Barton, et al, 2010).").

⁵ Doc. no. [247-7](#) at 2.

Merrimack,” and “private wells in the vicinity of the Saint-Gobain facility” to determine if they were contaminated with PFOA.⁶ The testing results form part of the record before the court. For example, the plaintiffs entered into evidence a chart reflecting the PFOA and PFAS detected in each of the MVDWW wells in periodic testing conducted from 2016 through 2019,⁷ and a link to the NHDES’ publicly available interactive “PFAS Sampling Map,” which identifies the amount of PFOA detected in well testing at particular locations surrounding the facility, along with the sampling date.⁸ This data shows variation in the levels of PFOA contamination found at different wells within the class areas. For example, one of the defendants’ experts, Michael Mobile, reviewed NHDES well sampling results and found that, of “999 wells located within the proposed class area, . . . approximately 47% [] did not have a reported PFOA detection equal to or greater than 20 parts per trillion” and “approximately 78% did not have a reported PFOA detection equal to or greater than 70 parts per trillion.”⁹

The NHDES confirmed that it did detect PFOA “in excess of applicable regulatory standards for groundwater . . . near the Saint-Gobain . . . facility,” and it responded to this discovery with a number of remedial measures.¹⁰ In April 2016, the NHDES began

⁶ [Id.](#)

⁷ [See](#) doc. no. [247](#).

⁸ NHDES PFAS Sampling Map, [available at](#) <https://nhdes.maps.arcgis.com/apps/dashboards/78fe1cb292af4cefbd49f281c43c658d>; [see also](#) 2018 Affidavit of Paul DeCarolis (doc. no. [247-9](#)) at ¶ 4.

⁹ 2019 Expert Report of Michael Mobile (doc. no. [418-1](#)) at 12.

¹⁰ Barr Report (doc. no. [246-5](#)) at 10; [see also](#) doc. no. [246-20](#).

delivering bottled water to 400 properties in Merrimack and Litchfield, New Hampshire, which were “served by private wells” and within a one-mile radius of the Saint-Gobain facility.¹¹ In a press release issued that month, the NHDES wrote that it “made th[e] decision to provide the bottled water to help protect the public’s health based on data that indicate an area of contamination of private drinking water wells.”¹² According to a sworn affidavit from the Business Manager of MVDWW, two of the six wells that supply water to the MVDWW system were also shut down around April and May 2016 after the discovery of “elevated levels of PFOA . . . in the well water.”¹³

Two years later, in 2018, Saint-Gobain entered into a consent decree with the State, under which it agreed to pay for alternative water sources for contaminated properties. The consent decree required Saint-Gobain to pay for the expansion of the municipal water system to specific properties, or alternatively, to install and maintain point-of-entry treatment system “at certain properties.”¹⁴ That same year, the NHDES found that additional private wells were contaminated, and it instructed property owners to decommission those wells.¹⁵ Saint-Gobain continued sampling wells for PFOA contamination and reporting its findings to the NHDES in the following years.¹⁶

¹¹ Doc. no. [247-10](#) at 2.

¹² [Id.](#)

¹³ 2018 Affidavit of Jill Lavoie (doc. no. [247-9](#)) at ¶ 6; Barr Report (doc. no. [246-5](#)) at 12.

¹⁴ Doc. no. [247-8](#) at 8.

¹⁵ [See](#) doc. no. [247-19](#).

¹⁶ [See, e.g.](#), December 8, 2020 Bimonthly Status Report Work Plan for Sampling Water Supply Wells and Provision of Alternative Water (doc. no. [247-14](#)).

Around this time period, Saint-Gobain hired Barr Engineering Company to develop models to “evaluate and simulate the transport mechanisms of PFOA released by historical air emissions at the Saint-Gobain . . . facility in Merrimack . . . that may have resulted in the presence of PFOA in soil and groundwater in the vicinity of th[e] facility.”¹⁷ Barr compared the simulation results to “measured PFOA concentrations in soil and groundwater within the study area to identify areas where exceedances of regulatory standards potentially may be associated with historical air emissions” from the facility.¹⁸ Barr’s analysis focused on an area in Southern New Hampshire surrounding the Merrimack facility, the boundaries of which were defined by the NHDES and closely relate to the class geographic areas.

In order to complete this simulation, Barr used operational and emissions data from 2004 to 2014 provided by Saint-Gobain, from which it estimated how many pounds of PFOA were released by the facility every year from 1986 through 2014. According to these estimates, the facility released hundreds of pounds of PFOA into the air between 1986 and 2006, and emissions dropped sizably in 2007 “primarily [as] a result of manufacturer’s phase out.”¹⁹

Barr employed four models developed by the United States Environmental Protection Agency or the United States Geological Services to estimate the movement of

¹⁷ Barr Report (doc. no. [246-5](#)) at 9.

¹⁸ [Id.](#)

¹⁹ [Id.](#) at 14, 71.

the PFOA emissions from the air, to the ground, and below to groundwater.²⁰ Barr used AERMOD “for simulating dispersion and deposition of PFOA” onto the ground “from stack emissions”; Soil Water Balance “for simulating recharge using data for precipitation, temperature, soils, land use, and topography”; MODFLOW-NWT “for simulating three dimensional saturated groundwater flow and one-dimensional vertical groundwater flow through the unsaturated zone”; and MT3D-USGS “for simulating solute transport in the saturated and unsaturated zone.”²¹ In short, the first two models “generalize many ‘above-ground’ processes relevant to PFOA transport, whereas key subsurface processes are approximated using” the latter two models.²² Further, the MODFLOW and MT3D models produce “output that can be directly evaluated [against] measured data,” including “measured concentration of PFOA in soils[] and measured concentrations of PFOA in groundwater.”²³

Barr released a preliminary report with its findings in June 2017. It revised the report in September 2018 to correct two tables but did not otherwise amend the report or its conclusions.²⁴ Barr concluded that it had “successfully modeled [t]he overall pattern and distribution” of PFOA in soil and groundwater within its study area, and it found that the air deposition of PFOA from Saint-Gobain’s facility “may have contributed to the

²⁰ See 2018 Expert Report of David Sullivan (doc. no. 122) at 11; Barr Report (doc. no. 246-5) at 9, 14, 68.

²¹ Barr Report (doc. no. 246-5) at 9.

²² 2021 Expert Report of Michael Mobile (doc. no. 404-4) at 11.

²³ Id.

²⁴ Barr Report (doc. no. 246-5) at 3.

observed PFOA in groundwater in portions of the study area located in close proximity to the . . . facility.”²⁵ Barr also noted in its report that “PFAS . . . were used in the manufacture of many commercial materials for industrial, commercial, and residential use,” and thus “[t]here are numerous other likely source of PFAS in the study area” including car washes, landfills, junkyards, and agricultural fields.²⁶ Barr did not analyze the movement of PFOA from these potential, alternative sources in its study.²⁷

A. This suit

The named plaintiffs filed a putative class action complaint against Saint-Gobain and Busnel in state court in May 2016, and Saint-Gobain removed the case to this court the following month. More recently, in January 2021, the plaintiffs filed a third amended complaint, asserting claims against Saint-Gobain and Busnel for trespass, nuisance, negligence, and negligent failure to warn, and against Saint-Gobain for Busnel’s actions, under the theory of respondeat superior. They allege damages in the form of discomfort, annoyance, loss of use and enjoyment of property, diminished property value, the need for and cost of mitigating contamination, and, for private well owners, the costs associated with switching from private wells to municipal water.²⁸

The “proposed class consist[s] of residential property owners within defined geographic areas” who are allegedly “impacted by” groundwater contamination related to

²⁵ [Id.](#) at 9.

²⁶ [Id.](#) at 9-10.

²⁷ [Id.](#) at 9.

²⁸ Mot. for Class Cert (doc. no. [255-1](#)) at 25; Third Amended Compl. (doc. no. [348](#)) at ¶¶ 1, 53.

PFOA emissions from the Saint-Gobain facility.²⁹ The class includes individuals who obtain their household water from two sources—private wells and municipal water, or the MVDWW system. The putative class and two subclasses are defined as follows:

All persons who on or after March 4, 2016 own or owned residential properties with private wells in the Private Well Property Owners Class Geographic Area or residential properties in the Merrimack Village District Water Works (MVDWW) Class Geographic Area which are supplied household water by MVDWW (Property Damage Class).

Subclass A:

All persons who on or after March 4, 2016 own or owned residential properties with private groundwater wells within the Private Well Class Geographic Area (Private Well Property Owners Property Damage Subclass).

Subclass B:

All persons who on or after March 4, 2016 own or owned residential properties in the Merrimack Village District Water Works (MVDWW) Class Geographic Area which are supplied household water by MVDWW (MVDWW Property Owners Property Damage Subclass).³⁰

The plaintiffs define the MVDWW Class Geographic Area to reflect the MVDWW service map, and they define the Private Well Class Geographic area as follows.

In Bedford and Merrimack, the geographic area west of the Merrimack River within three (3.0) miles of the property boundary of the Saint-Gobain Site; in Litchfield, the Geographic area bounded by the Merrimack River on the west, Cummings Drive on the South, extended east to the Merrimack River and west to the Londonderry Town line, and the Londonderry Town line on the East and the City of Manchester on the North and East, and the geographic area in Manchester bounded by Raymond Wieczorek Drive on the North and East, and the geographic

²⁹ Mot. for Class Cert. (doc. no. [255-1](#)) at 25.

³⁰ [Id.](#) at 26-27.

area in Manchester bounded by Raymond Wieczorek Drive on the North and is depicted in Appendix A, Private Well Class Geographic Area Map.³¹

In a sworn affidavit, plaintiffs' counsel explained that the boundaries of the Private Well Class Geographic Area were based, at least in part, on the NHDES' well test results, which (as described above) catalogue the level of PFOA found in groundwater wells, along with the address of the parcel tested and the test date.³²

The plaintiffs attached maps of the Private Well Class Geographic Area and the MVDWW Class Geographic Area (hereinafter referred to together as the class areas or class geographic areas) to their complaint. These maps are attached as Exhibits 1 and 2 to this Order, respectively.³³

Both parties submitted expert reports to support their positions. The court previously ruled on the parties' motions to exclude the opinions of several experts under [Federal Rule of Evidence 702](#), and the court deemed the opinions admissible, with some limited exceptions.³⁴ The opinions of the plaintiffs' experts—which the court finds to be relevant and sufficiently reliable to support its class certification analysis—are summarized in brief and in pertinent part below. Relevant and reliable portions of the defendants' expert reports are summarized later, [infra](#) Section III.E.i.

³¹ [Id.](#) at 27.

³² 2018 Affidavit of Paul DeCarolis (doc. no. [247-9](#)) at ¶¶ 4-6.

³³ Doc. nos. [255-2](#), [255-3](#).

³⁴ Expert Order (doc. no. 437).

B. Plaintiffs' expert witnesses on PFOA contamination

David Sullivan is a meteorologist with 45 years experience in air quality and meteorological analysis.³⁵ He reviewed Barr's analysis of the airborne transport and deposition of PFOA from the facility using the AERMOD model, and he compared the AERMOD results with data on the concentration of PFOA in groundwater in the class areas, which was gathered from the sampling of "hundreds of sites" from 2016 to 2018.³⁶

As an initial matter, Sullivan opined that PFOA is "persistent in the environment," and, where it is present, PFOA "can be expected to remain . . . for many more years."³⁷ Sullivan also asserted that "[d]ispersion of PFAS emissions from the Saint-Gobain facility in Merrimack occurs on an area-wide basis," and is properly modeled using data that is common to the class areas, including "emissions data, [] release specifications, [] emissions pathways, [and] [] meteorological data."³⁸ According to Sullivan, he can reliably estimate the "dispersion and deposition of pollutants emitted from [the] Saint-Gobain facility at locations throughout the class geographic area" using this common data, but "it is neither necessary nor appropriate to model air quality or deposition impacts separately on a location-by-location basis to evaluate dispersion and deposition of APFO from the Saint-Gobain facility," or "to show that the PFAS contaminants from

³⁵ 2020 Expert Report of David Sullivan (doc. no. [378-9](#)) at 38.

³⁶ 2018 Expert Report of David Sullivan (doc. no. [122](#)) at 12.

³⁷ 2020 Expert Report of David Sullivan (doc. no. [378-9](#)) at 16.

³⁸ 2018 Expert Report of David Sullivan (doc. no. [122](#)) at 12-13.

the Saint-Gobain facility were dispersed throughout and beyond the class geographic area.”³⁹

Based on his analysis, Sullivan concluded that “the Saint-Gobain facility is the source of the high levels of PFAS contamination measured throughout the class geographic area[s].”⁴⁰ More specifically, he found that “dispersion of PFAS emissions from the Saint-Gobain facility . . . occurs on an area-wide basis . . . throughout the boundaries of the class geographic areas, including all properties within these boundaries, including each class representative’s property” and “the locations of the MVDWW wells,” and this deposition “occurred throughout the class areas each year [that] Saint-Gobain” and the facility’s previous owner Chemfab “were in operation and used APFO.”⁴¹ Sullivan further noted that the pattern of groundwater contamination in the class areas is consistent with Saint-Gobain as the source, with the concentration of PFOA decreasing as distance from the facility increases, and approaching zero “at the most distant locations” from the facility.⁴²

Sullivan also considered other potential sources of PFOA contamination in the class areas. He noted that the NHDES “has evaluated over 40 potential sources of PFOA emissions,” and the “only other identified airborne source of PFOA with quantified

³⁹ Id. at 13.

⁴⁰ 2018 Expert Report of David Sullivan (doc. no. [122](#)) at 12.

⁴¹ 2020 Expert Report of David Sullivan (doc. no. [378-9](#)) at 11.

⁴² 2018 Expert Report of David Sullivan (doc. no. [122](#)) at 12; see also 2020 Expert Report of David Sullivan (doc. no. [378-9](#)) at 10-11.

airborne emission rates is the Textiles Coated Incorporated (TCI) facility that operated in Amherst, New Hampshire from 1985 to 2006.”⁴³ Sullivan opined that “[e]missions from TCI do not explain the pattern of deposition that occurs in the class geographic areas,” particularly the “decreasing trend of PFOA [groundwater] contamination with distance from” the facility.⁴⁴ He added that other potential sources of contamination identified by the defendants, such as Harcros Chemicals Incorporated and the Merrimack landfill, are not “consistent with the observed contamination pattern that was created by the air deposition pathway.”⁴⁵

In short, Sullivan used data and modeling that is common to the class to conclude that Saint-Gobain’s emissions of PFOA “dispersed and deposited” onto the ground at each and every property in the class areas.⁴⁶ Sullivan further opined that other sources of PFOA emissions potentially had “localized” effects, but they “would not explain the general trend in the groundwater contamination pattern around [the] Saint-Gobain [facility].”⁴⁷ Sullivan did not quantify the contributions of the other PFOA sources to the contamination in the class areas or incorporate the other sources into his analysis of PFOA deposition.⁴⁸

⁴³ 2020 Expert Report of David Sullivan (doc. no. [378-9](#)) at 35.

⁴⁴ [Id.](#)

⁴⁵ [Id.](#)

⁴⁶ [Id.](#)

⁴⁷ [Id.](#)

⁴⁸ See, e.g., June 4, 2021 Deposition Tr. of David Sullivan (doc. no. [271-13](#)) at 224:16-225:9 (agreeing that he did not quantify “what percentage of PFOA emitted from the TCI facility was deposited within the proposed class areas”); Oct 11, 2019 Deposition Tr. of David Sullivan (doc.

Hyeong-Moo Shin, Ph.D. has 15 years of research experience in environmental health sciences and focuses, in part, on modeling the fate and transport of toxic chemicals.⁴⁹ Shin began with the premise that PFOA that is emitted into the air by manufacturing facilities is deposited on the ground, and it can travel through soil to groundwater. He described this phenomenon as a “well-accepted transport mechanism” for contaminants, like PFOA, that are “extremely persistent in an outdoor environment.”⁵⁰ He also opined that the four models that Barr used to evaluate and simulate the transport of PFOA air emissions from the Saint-Gobain facility are “well-accepted and thus widely used in the field of environmental science and engineering” due to their “reliability and maturity.”⁵¹

Shin concluded that emissions of PFOA from the Saint-Gobain facility “contributed to the observed PFAS in groundwater in the class area.”⁵² He partly based this opinion on the pattern of contamination seen in the class areas, with high concentrations of PFOA observed in the wells closer to the facility, as well as “along the valley that includes low elevations” and in upstream wells.⁵³ According to Shin, this

no. 201-3) at 118:15-19 (“Q. Does your Table 1 in Exhibit 4 take into account the background amount of PFOA in the atmosphere? A. No. This is incremental modeling of the Saint-Gobain facility.”)

⁴⁹ 2020 Expert Report of Hyeong-Moo Shin (doc. no. 236-7) at 5.

⁵⁰ *Id.* at 7, 9.

⁵¹ *Id.* at 8.

⁵² *Id.* at 7.

⁵³ *Id.* at 10.

pattern is explained by “the topographic features present at the point of the air emissions,” such as the “steep hills to the east and the west” of the facility, and the “northerly and southerly winds” that transported PFOA from the facility.⁵⁴ Shin also opined that other sources of PFOA listed in the Barr Report “did not cause PFOA groundwater contamination in the class areas,” in part because they are not proven to cause widespread PFOA contamination.⁵⁵

Russell Detwiler, Ph.D., has a doctoral degree in civil engineering, and his research focuses on groundwater hydrology.⁵⁶ Detwiler reviewed two of the models used in the Barr Report—the MODFLOW and MT3D models—which analyze the movement of PFOA from the ground surface to the water table and then the underlying aquifer.⁵⁷ He found that the Barr models “underestimated measured [PFOA] concentrations in some wells.”⁵⁸ Detwiler recalibrated the models to more “closely match” actual measurements of PFOA concentrations in various MVDWW wells, and he tested the models’ “sensitivity to different parameters.”⁵⁹ He concluded that two of his recalibrated models, which he referred to as Models 3 and 4, “bracket the likely actual concentrations of [PFOA] over time” and indicate “elevated PFOA concentrations in [] wells within the

⁵⁴ [Id.](#)

⁵⁵ [See id.](#) at 15-16.

⁵⁶ 2020 Expert Report of Russell Detwiler (doc. no. [231-10](#)) at 2.

⁵⁷ [Id.](#) at 3-4.

⁵⁸ [Id.](#) at 5.

⁵⁹ [Id.](#) at 2, 7.

class area in the years since 2016.”⁶⁰ At the end of his report, Detwiler included a table listing the average annual PFOA concentrations at five of the MVDWW wells from 1986 through 2030, as estimated by Models 3 and 4.⁶¹ Like Sullivan, Detwiler did not model the contributions of other PFOA sources to the contamination in the MVDWW wells.

Finally, Christopher Baggett is a licensed professional engineer with expertise in the “analysis, modeling, and design of water, wastewater, and reclaimed water systems.”⁶² Baggett used a “water quality model” called WaterGEMS to simulate the transport of PFOA throughout the MVDWW distribution system and to produce “reasonable estimates” of PFOA concentrations “at various locations in the MVDWW water distribution system” from 2001 through 2019.⁶³ Baggett explained that water quality models are “a cost-effective tool to evaluate spatial and temporal variation of water quality constituents . . . and can be used to understand fate and transport of constituents through water distribution systems.”⁶⁴

Baggett fed a variety of information into his water quality model, including Detwiler’s estimates of PFOA concentrations in the MVDWW wells; measured PFOA concentrations in the MVDWW wells, where available; characteristics of the MVDWW system’s water pipes; and data on ground topography, water use, and well production.

⁶⁰ [Id.](#) at 8.

⁶¹ [See id.](#) at 14.

⁶² 2020 Expert Report of Christopher C. Baggett (doc. no. [231-11](#)) at 5.

⁶³ [Id.](#) at 8, 10.

⁶⁴ [Id.](#) at 9.

Using the results from his model, Baggett calculated the “average daily PFOA concentration in the MVDWWW water within each model pipe.”⁶⁵ He then identified the location of “each served residential property” and “associated” each property “with the nearest model pipe,” which allowed him to determine “the average daily PFOA concentrations for all served residential properties” from 2001 through 2019.⁶⁶ He combined this information with estimated property ownership periods to identify the “served residential properties that likely received drinking water with an average daily PFOA concentration of” at least 20 ppt or at least 70 ppt “for 365 days or more within each property ownership period.”⁶⁷ Baggett’s analysis also did not model or incorporate the contributions of other sources of PFOA to groundwater contamination.

C. Plaintiffs’ expert witnesses on damages

The plaintiffs present two experts on class-wide, or aggregate, economic damages. Jeffrey Carr, President and Senior Economist at Economic and Policy Resources, Inc., estimated the aggregate costs associated with the forced abandonment of contaminated private wells. Randall Bell, who holds a Ph.D. in human and organizational systems and specializes in real estate damage economics and valuation, calculated the aggregate diminution in class area property values caused by PFOA contamination.

Carr focused his analysis on the properties within the class areas that switched from private wells to municipal water. He explained that plaintiffs’ counsel provided him

⁶⁵ [Id.](#) at 32.

⁶⁶ [Id.](#)

⁶⁷ [Id.](#)

with “a list of addresses . . . of affected properties and the date each property was connected to municipal water.”⁶⁸ Carr defined the cost of forced abandonment of private wells as the difference between the cost of municipal water and the cost of owning, operating, and maintaining a private well. He aggregated this surplus cost across several years, beginning with the dates on which the properties were connected to municipal water lines and ending in 2030. He selected the year 2030 as the endpoint based on the “average duration of home ownership in the region.”⁶⁹

Carr calculated municipal water costs for each of the three cities in the class areas with affected properties—Merrimack, Litchfield, and Bedford—by summing each city’s flat meter fee, water consumption fee (a flat fee per centum cubic foot of water consumed), and “miscellaneous fees.”⁷⁰ To project future municipal water costs, Carr assumed that the fees would rise at a rate “corresponding to the March 2001 to March 2020 annual average rate of growth of the consumer price index.”⁷¹ He also approximated future average water consumption in the three cities based on past consumption trends, as reflected in “detailed billing data” from households in Litchfield.⁷²

⁶⁸ 2020 Expert Report of Jeffrey Carr (doc. no. [297-2](#)) at 3.

⁶⁹ [Id.](#)

⁷⁰ [Id.](#)

⁷¹ [Id.](#) at 4.

⁷² [Id.](#) at 4-5.

Next, Carr estimated that the average annual maintenance and operation costs for a private well is \$225. He based this number on information from two service providers, “Skillings & Sons, Inc. of Amherst, NH and Capital Well Cleaning Water Center of Lancaster, NH.”⁷³ Carr’s contact at Skilling & Sons stated that the annual cost depends on the well, including its location, filters, and age, and it “[m]ight cost \$120 for a tune up or \$250 for two hours of work” on the well.⁷⁴ Carr’s contact at Capital Well told him that a pumping system “is good for years but should be periodically tested,” and that it “costs between \$200 and \$250 for us to check it annually.”⁷⁵ During his deposition, Carr acknowledged that the \$225 estimate “does not explicitly account for all instances of failure, . . . testing, . . . breakdown in pumps,” and “electricity charges,” but he also pointed out that each address “is not going to have their pump break, . . . [and] is . . . [not] necessarily [going to] test their water every year professionally”⁷⁶ Finally, Carr compared the aggregate private well costs with the aggregate municipal water costs for the affected properties from 2016 through 2030 and concluded that the present value of additional costs incurred by class members who switched from private wells to municipal water is roughly \$2.6 million.

Bell used mass appraisal techniques to calculate the aggregate diminution in property value across the class due to PFOA contamination in household water supplies.

⁷³ [Id.](#) at 15.

⁷⁴ Exhibit to 2020 Expert Report of Jeffrey Carr (doc. no. [297-5](#)) at 2.

⁷⁵ [Id.](#)

⁷⁶ May 26, 2021 Deposition Tr. of Jeffrey Carr (doc. no. [297-3](#)) at 102:12-16, 102:22-103:4.

Mass appraisal is the “process of valuing a universe of properties as of a given date using standard methodology, employing common data, and allowing for statistical testing.”⁷⁷

According to Bell, the impact of PFOA contamination on property values in this case is well suited for class-wide estimation using mass appraisal techniques because there is a “single identifiable source” and type “of contamination,” in an area with common geographical boundaries, consisting of a “common property type[]” (residential property), accompanied by “ample market data.”⁷⁸ He also noted that the contamination raises common concerns for residents and buyers, which create a risk element or “stigma” that “tend[s] to reduce property values across an area” in a manner that is “not unique to any individual parcel of property within the affected area.”⁷⁹

Bell primarily focused his analysis on single-family residences and condominiums within the class areas in Litchfield, Merrimack, Bedford, and Manchester. He first developed a regression to estimate the value of the class properties absent contamination, or the unimpaired value. The regression included several independent variables—the number of bathrooms, date of sale, age, lot and/or home size, and location (Bedford, Manchester, Litchfield, and Merrimack)—and a dependent variable of sale or rent price. Bell ran the regression on local sales data from 2012 through 2019, excluding sales in which some participants may have been aware, at least in part, of the PFOA

⁷⁷ August 28, 2020 Expert Report of Randall Bell (doc. no. [299-11](#)) at 62 (quoting Appraisal Foundation, USPAP Standard 6; International Association of Assessing Officers, Standard on Mass Appraisal of Real Property).

⁷⁸ June 25, 2018 Declaration of Randall Bell (doc. no. [299-9](#)) at 12-13.

⁷⁹ [Id.](#) at 8-9.

contamination at the property. By removing those transactions, Bell asserted that the sales data he used belonged to transactions in which PFOA contamination on the specific property was either not disclosed or disclosed in a neutral, positive, or ambiguous manner, and thus did not meaningfully affect the sales price.⁸⁰

Next, Bell used several mass appraisal techniques to estimate the reduction in property value due to contamination, which he separated into “risk effects” and “use effects.” Risk effects refer to the perception of environmental risk, and use effects reflect “the loss of conventional use of the subject properties due to household water PFAS contaminant issues.”⁸¹

Based on a literature review, Bell estimated that use effects cause property values to decline by at least 15% for properties with contamination levels greater than the regulatory maximum contaminant limit. Throughout his analysis, Bell applied the MCL of 12 ppt, which the State of New Hampshire adopted in July 2020. He combined estimated property rental prices, the period of time for which contamination at each property was above 12 ppt, and the 15% use effect, and he calculated an aggregate use effect of not less than \$142 million.

Bell primarily used three approaches to estimate risk effects: a literature review, an analysis of published case studies regarding the effect of household drinking water contamination on the perception of risk, and paired sales analysis. Bell’s paired sales

⁸⁰ See August 28, 2020 Expert Report of Randall Bell (doc. no. [299-11](#)) at 89, 165-68.

⁸¹ [Id.](#) at 18.

analysis focused on six class area properties that were sold during the period relevant to this litigation. Bell discerned based on disclosure forms exchanged during the sale that in each of the six transactions, the buyers were at least somewhat informed about the presence and detrimental nature of PFOA water contamination on the property. Bell compared the sales price of these properties with the sales price of comparable properties in other areas that were not known to be contaminated. Under this appraisal method, the difference in the properties' sale prices is attributable to contamination.

Bell finally pooled together his results from the different appraisal techniques in order to estimate a risk effect of 15% for properties with contamination levels above the MCL and 5% for properties with contamination levels below the MCL. He identified which properties in his study belong in each category using available well testing data and certain assumptions, applied the corresponding risk effect percentage to the estimated unimpaired values of the properties, and calculated an aggregate risk effect of not less than \$435 million. Adding the risk and use effects together, Bell found that the total diminution-in-value damages for the class area properties as of October 31, 2019 were “not less than \$577,935,862.”⁸²

III. Analysis

As previously noted, Saint-Gobain and Busnel (hereinafter referred to jointly as the defendants or Saint-Gobain) object to class certification, arguing in large part that the

⁸² [Id.](#) at 203.

plaintiffs' claims raise numerous individual issues. Saint-Gobain's objection to certification focuses on three [Rule 23](#) requirements—commonality, predominance, and superiority. Though Saint-Gobain does not dispute that the plaintiffs satisfy the other [Rule 23](#) elements, the court analyzes each requirement in turn below.

A. Ascertainability

“In addition to the explicit requirements of [Rule 23](#), courts generally recognize the implicit requirement that the class definition must be sufficiently definite to allow the court, parties, and putative class members to ascertain class membership.” [Kenneth R. ex rel. Tri-Cnty. CAP, Inc./GS v. Hassan](#), 293 F.R.D. 254, 263 (D.N.H. 2013) (McAuliffe, J.) (internal quotation omitted). To satisfy the ascertainability requirement, “the court must be able to resolve the question of whether class members are included or excluded from the class by reference to objective criteria.” [Raitport v. Harbour Cap. Corp.](#), 312 F. Supp. 3d 225, 236 (D.N.H. 2018) (McAuliffe, J.) (quoting [Matamoros v. Starbucks, Corp.](#), 699 F.3d 129, 139 (1st Cir. 2012)). If the class definition makes “class members impossible to identify prior to individualized fact-finding and litigation,” the class fails this basic requirement. [Crosby v. Soc. Sec. Admin. of U.S.](#), 796 F.2d 576, 580 (1st Cir. 1986).

The proposed class is ascertainable, as membership depends on three objective criteria—property ownership, on or after a specific date (March 4, 2016), and within defined geographical boundaries. Further, the class members can be identified without extensive, individual fact-finding, according to an affidavit submitted by plaintiffs' counsel. The names of current and past property owners in the designated locations can

be gathered from public records, including New Hampshire property records and city tax assessors' property ownership records or tax bills.⁸³ The property ownership records are available beginning as early as 2000.⁸⁴ Also, to the extent that the identified individuals left the class properties at some point, their current addresses can be determined, to an extent, using the U.S. Postal Service's National Change of Address database.⁸⁵

B. Numerosity

[Rule 23\(a\)\(1\)](#)'s numerosity requirement is satisfied if "the class is so numerous that joinder of all members is impracticable." [Berenson v. Nat'l Fin. Servs. LLC](#), 485 F.3d 35, 38 (1st Cir.2007). "No minimum number of plaintiffs is required to maintain a suit as a class action, but generally if the named plaintiff demonstrates that the potential number of plaintiffs exceeds 40, [this] prong of [Rule 23\(a\)](#) has been met." [Clough v. Revenue Frontier, LLC](#), No. 17-CV-411-PB, 2019 WL 2527300, at *3 (D.N.H. June 19, 2019) (Barbadoro, J.) (quoting [García-Rubiera v. Calderón](#), 570 F.3d 443, 460 (1st Cir. 2009)).

The plaintiffs submitted an affidavit from counsel and from the Business Manager of the MVDWW providing estimates of the size of the proposed class and subclasses. The court relies on these estimates in assessing the numerosity requirement. [See Hassan](#), 293 F.R.D. at 265 ("In deciding whether plaintiffs have met the numerosity requirement, the court 'may draw a reasonable inference as to the size of the class given the facts

⁸³ 2018 Affidavit of Paul DeCarolis (doc. no. [247-9](#)) at ¶¶ 9-10, 13.

⁸⁴ [Id.](#) at ¶ 13.

⁸⁵ [Id.](#) at ¶ 11.

before it.” (quoting [Rolland v. Cellucci](#), 1999 WL 34815562, at *3 (D. Mass. Feb. 2, 1999))). The MVDWW Business Manager asserted that the MVDWW service area is comprised of 8,905 households within Merrimack and 382 homes in Bedford, New Hampshire.⁸⁶ Further, an environmental consulting company hired by the plaintiffs calculated “over 1,200 owners of residential properties with private groundwater wells within the . . . Private Well Class Geographic Area.”⁸⁷ These numbers should increase after factoring in any turnover in property ownership in the areas since March 4, 2016. A potential class size of thousands of people, as here, satisfies the numerosity requirement.

C. Commonality

“Rule 23(a)’s requirement of commonality is a low bar, and courts have generally given it a more permissive application.” [In re New Motor Vehicles](#), 522 F.3d at 19 (internal quotation omitted). For class treatment to be appropriate, the class members’ claims “must depend on a common contention” that is “of such a nature that it is capable of class-wide resolution—which means that determination of its truth or falsity will resolve an issue that is central to the validity of each one of the claims in one stroke.” [Dukes](#), 564 U.S. at 350. “Even a single common question will do.” [Id.](#) at 359 (internal quotation and alterations omitted). The commonality inquiry does not focus, then, on the number of questions common to the class, but “the capacity of a class-wide proceeding to

⁸⁶ [Id.](#) at ¶ 12.

⁸⁷ [Id.](#) at ¶ 7.

generate common answers apt to drive the resolution of the litigation.” Id. (emphasis in original) (internal quotation omitted).

The commonality requirement is satisfied here. Saint-Gobain’s actions with respect to the release of PFOA and subsequent warnings and mitigation efforts; the geographical scope of contamination from Saint-Gobain’s emissions; and the toxic nature of PFOA are common issues that can be determined on a class-wide basis. These issues are also central to—and will thus meaningfully advance resolution of—each of the claims.

Indeed, the plaintiffs’ nuisance and trespass claims are predicated on the theory that Saint-Gobain caused the entry of a contaminant onto their properties. See Moulton v. Groveton Papers Co., 112 N.H. 50, 54 (1972) (“[A] trespass [is] an intentional invasion of the property of another”); Robie v. Lillis, 112 N.H. 492, 495 (1972) (A private nuisance is “an activity which results in an unreasonable interference with the use and enjoyment of another’s property.”). And Saint-Gobain’s actions surrounding the emission of PFOA and subsequent mitigation efforts, as well as the resulting contamination of the plaintiffs’ groundwater, are central to the duty, breach, and causation elements of the negligence claims, as discussed further infra Section III.E.iii. See Est. of Joshua T. v. State, 150 N.H. 405, 407 (2003) (“It is axiomatic that in order to prove actionable negligence, a plaintiff must establish that the defendant owed a duty to the plaintiff, breached that duty, and that the breach proximately caused the claimed injury.” (internal citation omitted)).

Saint-Gobain argues that in order to satisfy the commonality requirement, the plaintiffs must, at a minimum, provide class-wide proof of injury by establishing that each property in the class area is contaminated by PFOA due to Saint-Gobain's emissions. According to Saint-Gobain, the plaintiffs fail to satisfy this burden, as they "have nothing that even purports to show PFOA at every location in the proposed class area."⁸⁸

This argument misapprehends [Rule 23](#)'s commonality requirement. The plaintiffs need not provide common evidence establishing that each putative class member was injured in order to satisfy commonality. The presence of uninjured class members does not preclude class certification if, as is the case here, there is "a mechanism that can manageably remove uninjured persons from the class in a manner that protects the parties' rights." [In re Asacol Antitrust Litig.](#), 907 F.3d 42, 54 (1st Cir. 2018). As a prime example, the record indicates that NHDES sampling has captured negligible amounts of PFOA in some wells within the class areas.⁸⁹ Plaintiffs' counsel explained in an affidavit that each NHDES well sample has been associated with a physical address.⁹⁰ Thus, to the extent that property owners are found to be uninjured based on the well sampling

⁸⁸ Defs.' Objection to Class Cert. (doc. no. [270-1](#)) at 27.

⁸⁹ See 2019 Expert Report of Michael Mobile (doc. no. [418-1](#)) at 33 (map depicting NHDES sampling results as of 2019, which includes some wells within the class area in which PFOA was not detected); but see Pls.' Reply Brief (doc. no. [292](#)) at 42-43 ("Even those properties whose private wells tested non-detect (in a single test) had air deposition of toxic PFOA . . .").

⁹⁰ 2018 Affidavit of Paul DeCarolis (doc. no. [247-9](#)) at ¶ 7.

data, they can be identified through property ownership records, as described supra Section III.A, and manageably removed from the class.

Rather than class-wide injury, the common question in this case (which is susceptible to class-wide proof) is the geographic scope of PFAS contamination attributable to Saint-Gobain, and to what extent this contaminated area overlaps with the class areas. Accord [Mejdrech v. Met-Coil Sys. Corp.](#), 319 F.3d 910, 911 (7th Cir. 2003) (noting, in a class action concerning a factory’s release of toxic chemicals into surrounding groundwater, that “[t]he question[] . . . whether the [chemical] reached the soil and groundwater beneath the homes of the class members [is] common to all the class members” and, since “[t]he class members’ homes occupy a contiguous area the boundaries of which are known precisely,” the relevant inquiry “is whether this area or some part of it overlaps the area of contamination.”).

The plaintiffs have provided class-wide proof of the geographic scope of contamination attributable to Saint-Gobain by using common data and models to estimate the transmission of PFOA from the facility’s air emissions to the groundwater on an area-wide, and not site-specific, basis. The plaintiffs’ experts largely used the same models that Saint-Gobain’s own consultant used in the Barr Report to simulate this movement of Saint-Gobain’s PFOA emissions. Barr specifically stated in its report that the four models are used for “regional” modeling, and not “site-specific modeling performed to simulate groundwater flow conditions in a small area”⁹¹ Further, based on this area-

⁹¹ Barr Report (doc. no. [246-5](#)) at 10.

wide modeling and well sampling data, the plaintiffs' experts agree that Saint-Gobain's PFOA emissions contributed to the groundwater contamination across the class areas, even if the full volume of contamination on any given property may not be solely attributable to Saint-Gobain.

Saint-Gobain also argues that the plaintiffs fail to satisfy the commonality requirement because PFOA contamination must be modeled on a site-specific or property-by-property, instead of on an area-wide, basis. Based on the record before it, the court concludes that this challenge can be asserted against the class as a whole or in a manner that is manageable in a class format, and thus does not preclude a finding of commonality. Indeed, the defendants' experts do not specify or utilize a property-by-property or localized method to map out the locations of groundwater contamination caused by the Saint-Gobain facility. Further, during oral argument, counsel did not meaningfully identify a method or model that Saint-Gobain purportedly intends to use to refute the presence of PFOA contamination attributable to Saint-Gobain on a property-by-property basis.⁹² Instead, Saint-Gobain's experts raise a number of challenges to the

⁹² See, e.g., Dec. 1, 2022 Morning Hearing Tr. (doc. no. 430) at 70:17-71:19 (defense counsel confirmed that the defendants' experts did not "do their own model" with individualized assessments of contamination attributable to Saint-Gobain within the class areas, and counsel further asserted, without detail, that "these defenses [are] in our view."). It bears noting that one of Saint-Gobain's expert witnesses, Lyle Chinkin, stated that "[t]he measured PFAS concentrations in water samples in the proposed class areas are often at levels close to background PFOA found in the surface waters of New Hampshire and upstate New York; these levels cannot be attributed to the [Saint-Gobain] Merrimack facility and are disregarded by the plaintiffs' experts." July 6, 2021 Expert Report of Lyle Chinkin (doc. no. 356-3) at 30. The defendants' experts Sorab Panday and John Connor contended that there are a handful of "hot spots" at various distances from the facility, where elevated PFOA "concentrations in groundwater suggest local sources of PFOA rather than air deposition from" Saint-Gobain. 2021 Expert Report of John Connor and Sorab Panday (doc. no. 356-4) at 33-34. To the extent that

validity, comprehensiveness, and accuracy of the plaintiffs’ area-wide models and underlying assumptions—critiques that apply across the class.

The court accordingly finds that the geographic scope of Saint-Gobain’s groundwater contamination is a common issue that can be resolved on a class-wide basis. In drawing this conclusion, the court emphasizes that there is a distinction between the presence of PFOA contamination attributable to Saint-Gobain (an issue that is susceptible to class-wide proof and defenses, as discussed in this Section) and the relative contribution of Saint-Gobain, as compared to other sources, to the amount of PFOA contamination at locations within the class areas (an issue that may require individualized analysis, as discussed infra Section III.E.i).

D. Typicality and adequacy

“The typicality and adequacy requirements” of [Rules 23\(a\)\(3\)](#) and [\(a\)\(4\)](#) “overlap.” [Hassan](#), 293 F.R.D. at 270. To satisfy the typicality requirement, “the named

the defendants intend to argue, on these grounds, that Saint-Gobain’s PFOA is not present in certain portions of the class area groundwater, these arguments do not defeat commonality as to the issue of the geographic scope of Saint-Gobain’s contamination. This is because the defendants do not specifically explain whether and why the “background PFOA” or the “local hot spot” defense can only be raised on a property-by-property or individualized basis. Cf. [Bais Yaakov of Spring Valley v. ACT, Inc.](#), 12 F.4th 81, 89 (1st Cir. 2021) (“In deciding whether individual issues predominate over common questions, a court must not rely on mere speculation that individual issues may arise.”). Without such detail from the defendants, and based on the data on which these defenses rely and the limited number of “hot spots,” the court is convinced, by a preponderance, that the defenses can be asserted in a manner that is manageable in a class format. And if they require some individualized analysis (which the court does not presently find), the record does not indicate that such analysis would overwhelm the common issues and evidence discussed in this Section. See [Applegate v. Formed Fiber Techs., LLC](#), No. 2:10-CV-00473-GZS, 2012 WL 3065542, at *6 (D. Me. July 27, 2012) (“Where class members have different degrees of injury or even where defenses might exist only as to particular individuals, commonality has been found for class certification.”).

plaintiff[s]’ claim[s] and the class claims [should be] so interrelated that the interests of the class members will be fairly and adequately protected in their absence.” [General Tel. Co. of Southwest v. Falcon](#), 457 U.S. 147, 157 n.13 (1982). “Typicality, as with commonality, does not require ‘that all putative class members share identical claims.’” [In re Neurontin Mktg. & Sale Pracs. Litig.](#), 244 F.R.D. 89, 106 (D. Mass. 2007) (quoting [In re Warfarin Sodium Antitrust Litig.](#), 391 F.3d 516, 531-32 (3d Cir. 2004)). Rather, named representatives’ claims are typical if they “arise from the same event or practice or course of conduct that gives rise to the claims of other class members, and are based on the same legal theory.” [García-Rubiera](#), 570 F.3d at 460 (internal quotations and alterations omitted).

Similarly, adequacy requires that “the representative parties . . . fairly and adequately protect the interests of the class.” [Amchem Prod., Inc. v. Windsor](#), 521 U.S. 591, 625 (1997). Specifically, “[t]he moving party must show first that the interests of the representative party will not conflict with the interests of any of the class members, and second, that counsel chosen by the representative party is qualified, experienced and able to vigorously conduct the proposed litigation.” [Andrews v. Bechtel Power Corp.](#), 780 F.2d 124, 130 (1st Cir. 1985). With respect to the first part, “perfect symmetry of interest is not required[;] . . . [o]nly conflicts that are fundamental to the suit and that go to the heart of the litigation prevent a plaintiff from meeting the . . . adequacy requirement.” [Matamoros](#), 699 F.3d at 138 (quoting [Newberg on Class Actions](#) § 3:58 (5th ed. 2012)).

Both requirements are satisfied. As of the date of the third amended complaint, the class representatives are property owners in the proposed class areas that receive their water from private groundwater wells or MVDWW wells.⁹³ Each of the class representatives shares the same interests as the rest of the class, as the same “course of conduct . . . gives rise to the[ir] claims.” [In re Dial](#), 312 F.R.D. at 54. Specifically, the class representatives, like the putative class members, allegedly rely or relied on a household water source that is contaminated due to Saint-Gobain’s emission of toxic contaminants and subsequent failure to investigate, mitigate, and warn the surrounding population. The court does not find, and Saint-Gobain does not argue, that the different well types and potential variation in the duration or extent of the class representatives’ exposure to contaminated water render their claims atypical or present conflicts of interest with the class members. Finally, Saint-Gobain does not dispute class counsel’s adequacy; indeed, counsel are experienced in both class action litigation and legal practice.

E. Predominance

[Rule 23\(b\)\(3\)](#) requires that “questions of law or fact common to class members predominate over any questions affecting only individual members.” [Fed R. Civ. P. 23\(b\)\(3\)](#). The predominance inquiry “calls upon courts to give careful scrutiny to the relation between common and individual questions in a case.” [Tyson Foods, Inc. v. Bouaphakeo](#), 577 U.S. 442, 453 (2016). “An individual question is one where members

⁹³ See Third Am. Compl. (doc. no. 348) at ¶¶ 2-6.

of a proposed class will need to present evidence that varies from member to member, while a common question is one where the same evidence will suffice for each member to make a prima facie showing or the issue is susceptible to generalized, class-wide proof.” [Id.](#) (internal quotations omitted).

“[A] class may be certified notwithstanding the need to adjudicate individual issues so long as the proposed adjudication will be both ‘administratively feasible’ and ‘protective of defendants’ Seventh Amendment and due process rights.” [In re Asacol Antitrust Litig.](#), 907 F.3d 42, 52 (1st Cir. 2018) (quoting [In re Nexium](#), 777 F.3d at 19). Thus, at times, “[a] district court must formulate some prediction as to how specific issues will play out in order to determine whether common or individual issues predominate.” [Waste Mgmt. Holdings, Inc. v. Mowbray](#), 208 F.3d 288, 298 (1st Cir. 2000).

Saint-Gobain argues that the class members’ claims present “scores of individual inquiries” going to injury, causation, and damages, which defeat predominance.⁹⁴ Below, the court begins by analyzing whether common issues predominate with respect to Saint-Gobain’s liability under each claim, and then proceeds to consider the plaintiffs’ damages theories.

i. Liability – trespass

The plaintiffs allege that Saint-Gobain trespassed upon their land by causing PFOA to enter into their properties without their permission. “[A] trespass [is] an

⁹⁴ Defs.’ Objection (doc. no. [270-1](#)) at 2.

intentional invasion of the property of another.” [Moulton v. Groveton Papers Co.](#), 112 N.H. 50, 54 (1972). A defendant “is subject to liability to another for trespass, irrespective of whether [the defendant] thereby causes harm to any legally protected interest of the other, if [the defendant] intentionally . . . enters land in the possession of the other, or causes a thing or a third person to do so” [Case v. St. Mary’s Bank](#), 164 N.H. 649, 658 (2013) (quoting [Restatement \(Second\) of Torts § 158](#) (1965)). Trespass is an intentional tort. “To constitute an intentional tort, the tortfeasor must have known that his conduct was substantially certain to result in injury.” [Thompson v. Forest](#), 136 N.H. 215, 220 (1992) (emphasis in original).

Saint-Gobain contends that two elements of the trespass claim—contamination and Saint-Gobain’s state of mind—require individualized proof. As discussed supra Section III.C, the plaintiffs have shown that the geographic scope of contamination is suitable for class-wide determination. Cf. Fisher v. Ciba Specialty Chemicals Corp., 238 F.R.D. 273, 307 (S.D. Ala. 2006) (denying certification for nuisance and trespass claims centered on environmental contamination in part because “common proof will not show that any plaintiff’s property is, in fact, contaminated . . . ; moreover, plaintiffs have come forward with no scientific testimony under which these chemicals would have uniformly blanketed the area of concern”). Thus, the court turns its attention to Saint-Gobain’s state-of-mind argument.

Saint-Gobain is correct that, to have the requisite intent to trespass upon the class members’ land, Saint-Gobain must have known that the facility’s PFOA emissions were substantially certain to enter the class areas when it released them. According to Saint-

Gobain, the foreseeability of this entry varied “according to time and context” and is thus not susceptible to class-wide proof.⁹⁵ When asked to elaborate on its position during oral argument, Saint-Gobain asserted that the relevant time period for assessing its state of mind is the years and decades leading up to the class period—when Saint-Gobain released the specific PFOA that was present in the class area groundwater during the class period.⁹⁶ Saint-Gobain contends that the foreseeability of contamination from PFOA emissions varied over that stretch of time, in part because science on the chemicals was developing.

Saint-Gobain’s argument misstates the law on trespass, as it suggests that the intent element runs to the eventual harm to the plaintiff (in this case, groundwater contamination), and that liability for trespass attaches once that harm occurs. In fact, “the wrong” at issue in a trespass claim is the defendant’s “interference with the possessor’s interest in excluding others from the land.” [Restatement \(Second\) of Torts § 163 \(1965\)](#). Thus, “[t]he intention which is required to make the [defendant] liable” for trespass “is an intention to enter upon the particular piece of land in question,” and not an intention to cause a particular harm. [Id.](#) (emphasis added). Indeed, “even a harmless entry . . . if intentional, is a trespass.” [Id.](#) Finally, to be liable for trespass, the defendant need not “act for the purpose of entering” another’s piece of land; “[i]t is

⁹⁵ [Id.](#) at 34.

⁹⁶ [See](#) Dec. 1, 2022 Afternoon Hearing Tr. (doc. no. [429](#)) at 13:3-15:6.

enough that [the defendant] knows that [its] conduct will result in such an entry, inevitably or to a substantial certainty.” [Id.](#)

It follows, then, that the intent requirement is satisfied if Saint-Gobain knew that its act of emitting PFOA was substantially likely to cause an entry of the contaminant into the class areas—regardless of when that entry, and resulting harm, occurs or occurred. The plaintiffs attempt to make the requisite showing by focusing on Saint-Gobain’s intent from 2003 through 2006. The plaintiffs contend that, at least by 2003, Saint-Gobain “monitored the PFOA issue, . . . knew that [the] EPA was concerned about the toxicity to animals, [and] that its emissions were going into the atmosphere.”⁹⁷ The plaintiffs then point to the Barr Report’s estimates of annual PFOA emissions from the facility, which indicate that Saint-Gobain continued releasing hundreds of pounds of PFOA into the air in 2003, 2004, 2005, and 2006, before reducing its emissions to double or single digits beginning in 2007.⁹⁸

Saint-Gobain’s intent during the 2003-2006 time period can be established through common proof of Saint-Gobain’s knowledge of (1) the occurrence and volume of PFOA emissions from its facility; (2) the toxic nature of PFOA; and (3) the science showing that PFOA travels from the air, to the land, and then to the groundwater on an area-wide basis. The court finds no basis to conclude (nor does Saint-Gobain contend) that its knowledge of these matters varied during the 2003-2006 period. To the extent that

⁹⁷ Pls.’ Reply (doc. no. [292](#)) at 28.

⁹⁸ Barr Report (doc. no. [246-5](#)) at 71.

Saint-Gobain seeks to argue that it was not substantially certain during the 2003-2006 period that its emissions would enter the entirety of the class areas—in other words, that its intent to cause entry varied by location—it has not set forth a reason that this argument must be made on an individual basis, nor does that seem likely, since the record before the court includes area-wide, and not site-specific, models of the transport and movement Saint-Gobain’s PFOA emissions from air to water.

Finally, if Saint-Gobain seeks to argue that some class members were not and/or will not be harmed by the PFOA emissions from the 2003-2006 period (because, for example, those specific plaintiffs were no longer present in the class areas when the 2003-2006 emissions reached the groundwater), this argument goes to damages, and not liability. In other words, the issue of when the PFOA emitted in the 2003-2006 period reached the class area groundwater may affect the damages calculation, and potentially the allocation of damages among class members, but it does not affect the liability determination. The predominance element is accordingly satisfied with respect to Saint-Gobain’s liability for trespass.

ii. Liability – nuisance

The plaintiffs also allege that the contamination of their groundwater constitutes a nuisance. A nuisance is “an activity which results in an unreasonable interference with the use and enjoyment of another’s property.” [Robie](#), 112 N.H. at 495. A defendant is liable where the “harm imposed upon the plaintiff” by the defendant’s interference “was ‘greater than it is reasonable to require her to bear under the circumstances, without compensation.’” [Ferguson v. City of Keene](#), 111 N.H. 222, 224 (1971) (quoting

Restatement (Second) of Torts § 822 n.31). “In general, conduct will be unreasonable only when its utility to the [defendant] and to the public is outweighed by the gravity of the harm that results.” [Robie](#), 112 N.H. at 496.

The plaintiffs do not establish that the reasonableness of Saint-Gobain’s alleged actions can be determined on a class-wide basis. The plaintiffs assert that this is a common issue because it is judged by the reasonable person standard.⁹⁹ Even under the reasonable person standard, however, resolution of this issue requires individual inquiries into the extent to which the contamination caused by Saint-Gobain interfered with the class member’s specific use and enjoyment of his or her property. [See 58 Am. Jur. 2d Nuisances § 59](#) (“Unreasonableness, in the context of a private nuisance action, cannot be determined in the abstract but, rather, must be judged under the circumstances of the particular case”). Relevant considerations could include the amount of PFOA contamination present in the individual’s groundwater and attributable to Saint-Gobain during that individual’s period of occupancy, whether and when the individual obtained access to untainted water through, for example, the NHDES’s bottled water program or the expansion of municipal water lines, the effectiveness of mitigation efforts, and the specific inconveniences attendant to the installation of municipal water lines or decommissioning of private wells (if applicable). These matters are inherently individualized, and the plaintiffs have not presented a class-wide mechanism for accounting for each of these factors at the same time.

⁹⁹ Mot. for Class Cert. (doc. no. [255-1](#)) at 24.

These individual issues will predominate over common ones since they form the crux of the liability determination. See [Stafford v. Shea](#), 2006 WL 8418247, at *1 (N.H. Oct. 19, 2006) (“Essential to a finding of a private nuisance is a determination that the interference complained of is substantial and that it is unreasonable.”). The court therefore denies certification as to the nuisance claim.

iii. Liability – negligence and negligent failure to warn

Finally, the plaintiffs assert that Saint-Gobain acted negligently by emitting PFAS during facility operations; inadequately investigating and mitigating the contamination; and failing to warn of the contamination and associated risks. To prove its negligence and negligent failure to warn claims, the plaintiffs must “establish that the defendant owed a duty to the plaintiff, breached that duty, and that the breach proximately caused the claimed injury.” Est. of Joshua T., 150 N.H. at 407 (internal citation omitted); see also [Thibeault v. Campbell](#), 136 N.H. 698, 701 (1993) (“In order for one’s conduct to constitute tortious negligence, it must be in breach of an existing duty and create a foreseeable risk of harm to someone to whom that duty is owed.”).

The initial issue is whether Saint-Gobain owes and breached a duty of care. “In general, anyone who does an affirmative act is under a duty to others to exercise the care of a reasonable [person] to protect them against an unreasonable risk of harm to them arising out of the act.” Coan v. New Hampshire Dep’t of Env’t Servs., 161 N.H. 1, 8 (2010) (quoting Restatement (Second) of Torts § 302 comment a at 82 (1965)).

Importantly, “not every risk that might be foreseen gives rise to a duty to avoid a course of conduct; a duty arises because the likelihood and magnitude of the risk perceived is

such that the conduct is unreasonably dangerous.” [Thibeault](#), 136 N.H. at 701. Similarly, a defendant has a duty to warn if it has “reason to apprehend the danger to those not instructed.” [Trombly v. H.P. Hood & Sons](#), 84 N.H. 119 (1929); see also [Dobek v. Amoskeag Mfg. Co.](#), 79 N. H. 360, 361 (1920) (“Precautionary instruction is a duty only so far as there is reason to apprehend danger to those not instructed.”).

The existence of a duty, then, turns on two issues that are susceptible to class-wide proof: the foreseeability and magnitude of risk of harm to the class resulting from Saint-Gobain’s emissions. As explained supra Section III.E.i, foreseeability depends on class-wide proof regarding Saint-Gobain’s knowledge of its own emissions, the toxicity of PFOA, and the pathways through which those emissions cause groundwater contamination through a given area. The magnitude of risk is also informed by common evidence regarding the volume of PFOA emissions from the facility, and, again, the harmful effects of PFOA and the extent to which it is likely to travel based on area-wide modeling.

If the existence of a duty to the putative class members is established, its breach can also be proven through common evidence of Saint-Gobain’s actions with respect to emissions, mitigation, and warning the public. For example, Saint-Gobain’s knowledge of the contamination risks from its emissions have not varied since at least 2003, as discussed supra Section III.E.i, yet the record indicates that it continued emitting hundreds of pounds of PFOA through 2006, and it did not provide notification of its emissions to NHDES until 2016. Breach would also be proven through evidence of the geographic scope of PFOA contamination in the class members’ groundwater attributable

to Saint-Gobain. Again, the expert opinions of the plaintiffs have provided class-wide evidence on this issue by relying on area-wide models to conclude that the groundwater contamination throughout the class areas is attributable to Saint-Gobain, at least in part.

Next, to prove their negligence claims, the plaintiffs must establish that Saint-Gobain's actions were a proximate cause of the class members' injuries. A defendant's conduct is a proximate cause if it is both the "cause-in-fact," meaning that "the injury would not have occurred without the negligent conduct," and "the legal cause," meaning that it "was a substantial factor in bringing about the harm." [Est. of Joshua T., 150 N.H. at 407-08](#) (internal citations and quotations omitted). The causation inquiry focuses on whether the defendant's negligence "caused or contributed to cause the accident, . . . not on whether the defendant's negligence was the sole cause or the proximate cause." [Brookline School Dist. v. Bird, Inc., 142 N.H. 352, 355 \(1997\)](#) (emphasis in original) (internal citations omitted).

To establish that the defendant's conduct is the cause-in-fact, "[t]he plaintiff 'must produce evidence sufficient to warrant a reasonable juror's conclusion that the causal link between the negligence and the injury probably existed.'" [Est. of Joshua T., 150 N.H. at 407-08 \(2003\)](#). The plaintiffs assert that they can prove causation on a class-wide basis through their experts' opinions that Saint-Gobain's emissions contributed to groundwater contamination where present across the class areas. As discussed supra, Section III.C., Saint-Gobain does not adequately rebut this assertion by establishing that individualized proof is necessary to demonstrate that Saint-Gobain contributed to the presence of PFOA contamination within the class areas, and Saint-Gobain's challenges to the plaintiffs'

area-wide models are common to the class. Thus, the issue of whether Saint-Gobain is the cause-in-fact of the harm to the class members is susceptible to class-wide resolution.

In order to determine whether the defendant's conduct is the legal cause, or a substantial factor, in the harm, the court should consider "the number of other factors which contribute in producing the harm and the extent of the effect which they have in producing it[.]" [Restatement \(Second\) of Torts § 433 \(1965\)](#). In other words, the proximate cause inquiry requires analysis of alternative sources of PFOA in the class areas. As previously discussed, the plaintiffs' experts agree that a number of sources may have contributed to localized contamination in the class areas, but they do not explain the contamination seen throughout the class areas. The plaintiffs' experts do not model or quantify the impacts of these alternative sources. Saint-Gobain also offers a few expert reports that discuss the presence of alternative sources of PFOA in the class areas, though they do not quantify the sources' contributions throughout the class areas or at particular locations, either. These experts' opinions are briefly summarized below.

Michael Mobile holds a Ph.D. in civil engineering and specializes in quantitative hydrogeology and hydrology, "solute fate and transport, and water resources management."¹⁰⁰ Mobile asserted that the former Harcross Chemicals, Incorporated site and the former New Hampshire Plating Company Superfund site were located in Merrimack and used known contaminants in their operations. Further, according to Mobile, elevated levels of PFOA have been detected in the groundwater near these sites.

¹⁰⁰ 2019 Expert Report of Michael Mobile (doc. no. [418-1](#)) at 55, 57.

Mobile concluded that this “provides strong evidence that [the sites] represent . . . source[s] of PFAS, including PFOA, to groundwater within the proposed class area that is distinct from . . . Saint-Gobain air emissions.”¹⁰¹

In a joint report, engineers John Connor and Sorab Panday, Ph.D., opined on the sources of PFOA within the MVDWW water wells, and they concluded that “the documented presence of [other] potential sources [of PFOA], the spatial pattern of PFOA concentrations in the study area, the chemical composition of the PFAS mixture in groundwater, and known PFOA sources in the capture zones of the MVD[WW] wells” all “support the existence of PFOA sources to groundwater other than [the Saint-Gobain facility].”¹⁰²

Finally, Lyle Chinkin holds B.S. and M.S. degrees in atmospheric science and has worked in meteorology, air quality, air pollution, and emissions modeling. He criticized the plaintiffs’ experts’ “underlying assumption that the Merrimack facility is the single facility . . . that individually explains observed PFAS contamination throughout the proposed class areas.”¹⁰³ Chinkin pointed out that the NHDES is investigating other potential sources of PFOA emissions “in and around the proposed class areas, . . . which both individually and collectively may contribute to the observed PFAS concentrations” in the class areas.¹⁰⁴ One of these potential other sources is TCI, which Sullivan also

¹⁰¹ [Id.](#) at 20, 22.

¹⁰² 2021 Expert Report of John Connor and Sorab Panday (doc. no. [356-4](#)) at 33.

¹⁰³ 2021 Expert Report of Lyle Chinkin (doc. no. [356-3](#)) at 10.

¹⁰⁴ [Id.](#) at 9 (emphasis added).

agrees may have contributed to contamination in the class areas.¹⁰⁵ Chinkin provided a map depicting that “the PFOA deposition pattern from TCI clearly overlaps with the . . . proposed class areas.”¹⁰⁶

Chinkin also concluded that the variability of PFOA concentration across the class areas, as exhibited in water sampling data, “is not consistent with a single source impacting the proposed class areas” and “do[es] not support Saint-Gobain as the main source of PFAS” in the class areas.¹⁰⁷ He asserted that a “robust, property-by-property analysis is required to reliably determine the sources contributing to PFAS concentrations on any given property,” and an “aggregate impact assessment” is necessary to individually model the contributions of each source or facility to contamination within the relevant areas.”¹⁰⁸

These expert opinions lend some, credible support to the possibility that individualized or site-specific analysis is needed to determine the extent to which other sources contributed to contamination in parts of the class areas, and whether Saint-Gobain’s emissions are a substantial factor among those sources at particular locations. These opinions do not defeat predominance on the issue of Saint-Gobain’s liability for

¹⁰⁵ See June 4, 2021 Deposition Tr. of David Sullivan (doc. no. [271-13](#)) at 222:3-7 (“Q. Do you agree that some of the PFOA from the TCI Amherst facility was likely deposited within the proposed class areas in this case? A. Some would have been deposited within the Saint-Gobain class geographic area, yes.”).

¹⁰⁶ 2021 Expert Report of Lyle Chinkin (doc. no. [356-3](#)) at 21.

¹⁰⁷ [Id.](#) at 18.

¹⁰⁸ [Id.](#) at 9, 19-20.

negligence, however, for at least three reasons. First, none of Saint-Gobain's experts provides or uses a property- or site-specific method to identify locations in which Saint-Gobain's emissions were not a substantial factor in contamination. This strongly suggests that Saint-Gobain intends to argue against causation by asserting, as reflected in its experts' opinions, that the plaintiffs' evidence is simply incomplete or inadequate because it does not measure or model the contributions of other sources of PFOA emissions. This argument is common to the class. In other words, if successful, Saint-Gobain's argument as to the plaintiffs' "failure of proof on th[is] common question" of causation "likely would . . . end[] the litigation" as to the negligence claim "and thus would not . . . cause individual questions . . . to overwhelm questions common to the class." [Tyson Foods, Inc. v. Bouaphakeo](#), 577 U.S. 442, 457 (2016) (internal quotations and alterations omitted).

Second, it is possible that Saint-Gobain plans to assert its defense against causation by using area-wide models, such as those employed by Barr and the plaintiffs' experts, to map out regions in which other sources caused groundwater contamination and Saint-Gobain did not substantially contribute. If Saint-Gobain pursues this area-wide approach, again, its defense would be common to the class or manageable in the class action format.

Finally, even if Saint-Gobain does employ property- or site-specific analysis to support its position on causation, "individualized issues of causation do not preclude class certification" where "the proof as to other elements of negligence will be class-wide." [Collins v. Olin Corp.](#), 248 F.R.D. 95, 104 (D. Conn. 2008) (citing cases in which

classes were certified despite individual issues going to causation). In short, even if individual inquiries concerning causation arise, they would not overwhelm the common issues concerning duty and breach. The court concludes that the predominance element is satisfied with respect to Saint-Gobain’s liability for the torts of negligence and negligent failure to warn.

iv. Damages

The plaintiffs seek compensatory and enhanced compensatory damages for non-economic losses, including discomfort, annoyance, and loss of use and enjoyment of their properties. They also request economic damages for losses related to “the decreased value of their properties, the need for and the cost of mitigating the contamination, and[,] for private well owners, the increased cost” associated with switching to municipal water.¹⁰⁹ The record indicates that individual issues predominate as to each of these damages theories, precluding certification as to damages issues.

To begin, the plaintiffs contend that the calculation of non-economic damages turns on common issues because the “annoyances” caused by the contamination “are judged by a reasonable person standard.”¹¹⁰ The plaintiffs then cite a number of cases that confirm that liability for nuisance claims is judged under the reasonable person standard. The plaintiffs do not cite authority indicating that damages are accordingly

¹⁰⁹ Mot. for Class Cert. (doc. no. [255-1](#)) at 25.

¹¹⁰ Id. at 46.

assessed in a common manner without consideration of individual circumstances, nor does the court find that such a conclusion is supported by the law.

Next, the plaintiffs assert that the non-economic damages are susceptible to common proof because the class members share the same concerns regarding the toxicity and effect of PFOA contamination, and they were or are forced to take the same measures to respond to the contamination, including switching to municipal water sources and disclosing the contamination to prospective buyers. Even assuming that putative class members all share these burdens due to the PFOA contamination, this would not result in equivalent damages awards for each class member, or a common mechanism for allocating non-economic damages. Rather, each class member's damages would turn on multiple individualized factors including the extent of contamination, the amount of such contamination that is attributable to Saint-Gobain as opposed to other sources, the purpose and use of the property, the class members' period of occupancy or ownership and whether that preceded or followed mitigation efforts, and the success of mitigation efforts. Such individualized issues render class certification as to the plaintiffs' non-economic damages improper.

Calculation of the plaintiffs' economic damages also require numerous, individualized assessments. The plaintiffs' experts, Carr and Bell, estimated aggregate economic damages, or Saint-Gobain's total liability to the class, associated with the reduction in property values and, for private well owners, the cost of securing replacement water. Courts have permitted a class to proceed using aggregate damage calculations, "so long as the . . . calculation is based on reasonable methodology and the

individual damage calculations that follow can be made according to a common methodology.” 4 Newberg and Rubenstein on Class Actions § 12:2 (6th ed.); see, e.g., In re Nexium (Esomeprazole) Antitrust Litig., 296 F.R.D. 47, 59 (D. Mass. 2013) (finding that the predominance requirement was satisfied as to damages issues where the plaintiffs presented average or aggregate damage measurements which could vary among class members, and “individual class members [could] calculate their recovery” using “readily available” and “precise sales data”); New England Carpenters Health Benefits Fund v. First DataBank, Inc., 248 F.R.D. 363, 372 (D. Mass. 2008) (acknowledging the putative class’s reasonable model for “assessing aggregate damages,” certifying a class of individuals for whom “damage allocation poses no predominance or manageability problems,” and certifying another damages class only through 2003, after which point “questions of individual mitigation would certainly loom large” in allocation determinations).

In denying Saint-Gobain’s motion to exclude Carr and Bell’s opinions, the court has already determined that the experts relied on reasonable methodologies to demonstrate quantifiable damages to the proposed class. Thus, the court turns its attention to the conversion from aggregate to individual damages under each category of economic loss, beginning with replacement water costs. Most of the variables that Carr identified as determinative of replacement water costs vary across the class and require individualized assessment. Indeed, Carr asserted during his deposition that his aggregate damage calculation “doesn’t necessarily follow to each address because each individual address can have a different set of circumstances,” including differing “consumption

levels.”¹¹¹ Also, as previously noted, one service provider who informed Carr’s estimate of annual private well maintenance and operation costs asserted that the location, filters, and age of a well can affect maintenance needs and costs, and Carr testified that individual property owners’ vigilance can impact the frequency with which they test their wells. Perhaps unsurprisingly, the plaintiffs have not provided a common method for accounting for this variability when allocating the aggregate damages that Carr calculated.

Class members’ damages related to loss in property value also depend upon, and vary based on, individual factors including the extent and duration of contamination during the class member’s property ownership period, the timing and effectiveness of mitigation efforts, the portion of the contamination attributable to Saint-Gobain as opposed to other sources, and whether the property owner purchased or sold a property at an inflated price during the class period. Accord [LaBauve v. Olin Corp.](#), 231 F.R.D. 632, 677 (S.D. Ala. 2005) (concluding, in an environmental contamination case, that damages associated with reduced property values “are not amenable to computation by an easy or essentially mechanical method” but “will hinge on property-specific determinations” including whether the property is contaminated, “the extent of its contamination,” “the genesis and duration of the contamination,” and “the portion of that contamination attributable to [the defendant].”). Consistent with this, during his deposition, Bell agreed

¹¹¹ May 26, 2021 Deposition Tr. of Jeffrey Carr (doc. no. [297-3](#)) at 35:16-36:3.

that a variety of property-specific conditions can affect the impact of contamination on property value, including the amount of PFOA contamination and remediation efforts.¹¹²

To the extent that the plaintiffs argue that Bell's aggregate damage calculation adequately addresses such individual variability, the court disagrees. For example, while Bell's model distinguishes between properties that have contamination levels above or below the MCL, it does not further differentiate properties within those general categories, nor does it account for the amount of contamination attributable only to Saint-Gobain. Such factors should be considered in the allocation of individual damages, even if their omission is not fatal to an aggregate damage model.

In an attempt to secure certification as to damages despite the presence of these core, individual issues, the plaintiffs assert, without much elaboration, that "[t]he aggregate damages can be fairly distributed . . . in proportion to a particular property tax assessed value to the sum of the assessed values."¹¹³ During oral argument, plaintiffs' counsel did not meaningfully elaborate upon this or another method of allocation, stating instead that the plaintiffs are "going to propose an allocation plan . . . if there's an award, . . . based on the facts [present] at [that] time."¹¹⁴ These vague statements fall far short of satisfying the plaintiffs' burden under the predominance standard. See [Allied Orthopedic Appliances, Inc. v. Tyco Healthcare Grp. L.P.](#), 247 F.R.D. 156, 176 (C.D. Cal. 2007) ("it is simply not enough that Plaintiffs merely promise to develop in the future some

¹¹² June 26, 2019 Deposition Tr. of Randall Bell (doc. no. 299-10) at 169:5-21, 176:6-9.

¹¹³ Pls.' Reply (doc. no. 292) at 45.

¹¹⁴ Dec. 1, 2022 Afternoon Hearing Tr. (doc. no. 429) at 31:18-20.

unspecified workable damage formula. A concrete, workable formula must be described before certification is granted.” (internal quotations omitted)).

Thus, based on the record presently before it, the court concludes that the plaintiffs lack a common or manageable method for allocating damages to individual class members, precluding certification as to damages. The court is convinced, however, that several core liability issues can be proven on a class-wide basis, and these common issues predominate over the individualized inquiries pertaining to damages. See [Smilow](#), 323 F.3d at 40 (“Where, as here, common questions predominate regarding liability, then courts generally find the predominance requirement to be satisfied even if individual damages issues remain”); [Johnson v. Nextel Communications Inc.](#), 780 F.3d 128, 138 (2d Cir. 2015) (“Common issues—such as liability—may be certified, consistent with Rule 23, even where other issues—such as damages—do not lend themselves to class-wide proof.”); [Allapattah Services, Inc. v. Exxon Corp.](#), 333 F.3d 1248, 1261 (11th Cir. 2003) (“[N]umerous courts have recognized that the presence of individualized damages issues does not prevent a finding that the common issues in the case predominate.”); [Sterling v. Velsicol Chemical Corp.](#), 855 F.2d 1188, 1197 (6th Cir. 1988) (“No matter how individualized the issue of damages may be, these issues may be reserved for individual treatment with the question of liability tried as a class action.”).

Accordingly, the case will be bifurcated to accommodate for the individualized nature of the damages analysis. The first phase will focus on liability determinations and will be managed as a class action. Assessment of damages will follow. Further

discovery and findings from the liability phase will inform the format of the damages phase.

F. Superiority

In addition to predominance, [Rule 23\(b\)\(3\)](#) requires that a “class action [be] superior to other available methods for fairly and efficiently adjudicating the controversy.” [Fed. R. Civ. P. 23\(b\)\(3\)](#). Absent the class action vehicle, individual plaintiffs would be forced to prove the same factual issues concerning, for example, the presence of contamination on their property, Saint-Gobain’s actions with respect to emissions and mitigation, and the hazards associated with PFOA. This would be both inefficient and costly, given that these issues are suitable to class-wide proof and require multiple expert opinions and extensive expert analysis. Thus, in this case, a class action “achieve[s] economies of time, effort, and expense, and promote[s] . . . uniformity of decision as to persons similarly situated, without sacrificing procedural fairness or bringing about other undesirable results.” [Amchem, 521 U.S. at 615](#).


IV. Conclusion

For the reasons stated above, the plaintiffs’ motion for class certification¹¹⁵ is GRANTED in part and DENIED in part. The court certifies a liability class with respect to the trespass, negligence, and negligent failure to warn claims, but denies certification

¹¹⁵ Doc. no. [255](#).

as to the nuisance claim. If and when liability is established, the court will proceed to the damages phase of the case.

SO ORDERED.



Joseph N. Laplante
United States District Judge

Dated: December 29, 2023

cc: Counsel of Record