STATE OF VERMONT

SUPERIOR COURT Orange Unit	CIVIL DIVISION Docket No. 242-10-12 Oecv
TransCanada Hydro Northeast, Inc, Plaintiff v. Town of Newbury, State of Vermont, Defendants	DECISION ON THE MERITS

This matter is before the court on Plaintiff's appeal from the decision of the Newbury Board of Civil Authority, which assessed Plaintiff's flowage easements associated with the Wilder Dam at $1,472,800 as of April 1, 2012. The court considers the matter *de novo*. 32 V.S.A. § 4467.

A trial was held before the undersigned on May 4-5, 2015. Attorney Robert E. Woolmington represented TransCanada Hydro Northeast, Inc. ("TransCanada"). Attorney Jon T. Anderson represented the Town of Newbury ("Town"). Assistant Attorney General Mary L. Bachman and Chief Assistant Attorney General William E. Griffin represented the State of Vermont ("State"). Each party filed a post-trial memorandum.

The parties agree the proper formula for valuing flowage easements is the number of acres multiplied by the value per acre. However, they disagree about both the number of acres and the value per acre. TransCanada requests a valuation of $9,500 (19 acres at $500 per acre). The Town seeks a valuation of $2,160,000 (1,964 acres at $1,100 per acre). The parties agree the 2012 common level of appraisal as determined by the State of Vermont is 98.59% for the Town of Newbury.

NUMBER OF ACRES

In substance[1], the Town argues the easements subject to taxation should include all land within the 100-year flood plain, which it estimates to be 1,964 acres. TransCanada argues the easements subject to taxation should include only that land which is inundated by the Wilder Dam during normal operations, meaning an area of about 19 acres.

At trial, the court received several sources of evidence about the amount of acreage included in TransCanada's flowage easements: (1) deeds of conveyance recorded in the Town of Newbury land records; (2) Tax Stabilization Contract executed by TransCanada's predecessor, New England Power Company, together with associated correspondence; (3) Exhibit K "project area" for TransCanada's

[1] The 100 year flood line is located approximately at the perimeter of the easements as alleged by the Town and State. However, the appraiser indicated this is coincidence.

license issued by Federal Energy Regulatory Commission; (4) opinion of the State's[2] engineer/appraiser; and (5) opinion of TransCanada's engineer/hydro-geologist.

Deeds

Deeds recorded in the Newbury land records provide a helpful starting point for understanding the flowage easements. The easements were acquired during the planning and construction of the Wilder Dam. Yet as explained by TransCanada's predecessor, New England Power Company (NEPCO), the deeds themselves do not adequately define the acreage affected. An engineering study is required to obtain a fuller understanding of the scope of the flowage rights. In 1985, NEPCO's Director of Real Estate and Property Taxes stated the following in a letter to the Newbury Town Clerk:

> Attached is a listing of the grantors of flowage rights in Newbury to New England Power Company along with the book and page recording these rights. The rights were acquired to permit New England Power Company to flow the land to a specified elevation on the U.S.G.S. maps. **Most of the individual grantors gave us rights to elevation 385 feet and a few were granted at 390 feet. As a practical matter, 385 feet is the controlling elevation.**
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> **It would take an engineering study to determine the actual acreage subject to flowage**. We believe that our rights exist along the entire length of the river in Newbury. I have recently heard that the State of New York employs a formula for valuing flowage and storage rights. I have asked for a copy and will be glad to share it with you.

Defendant's Exhibit A (Sansoucy Appraisal, Tab F, Letter dated Nov. 8, 1985) (emphasis added). Thus, the easements are defined by elevation, and some easements allow for higher water elevation (390 feet above sea level) as compared with others (385 feet above sea level).

Furthermore, the testimony at trial indicates that the elevations refer to the water level at the Wilder Dam, not the elevation of the land subject to the easements. Water behind the dam "piles up" (as described by Mr. Sansoucy) creating a "backwater effect" (as described by Ms. Robinson) in relation to the rate of water flow (generally measured in cubic feet per second). Ms. Robinson indicated that the backwater effect can be understood by picturing a boulder in a river. The water collects upstream behind the boulder causing the water to be become elevated. She also explained that as the water continues to rise, the backwater effect of an object diminishes. Therefore, determining the particular area of land subject to flowage rights requires consideration of the deeds in combination with an engineering study.

Tax Stabilization Contract

In 1997, NEPCO entered a tax stabilization contract with the Town of Newbury. The contract states, "The property subject to this contract consists of flowage rights affecting approximately 1100 acres described in Exhibit A attached hereto and incorporated herein by reference." Defendant's Exhibit

[2] TransCanada's appraiser did not express an opinion about the acreage subject to flowage rights. Instead, he was directed to assume the easements comprised 24 acres. Subsequent to the appraisal, he opined that his appraisal was valid for easements covering fewer than 60 acres.

A (Sansoucy Appraisal, Tab F, Letter dated May 23, 1997, and Tax Stabilization Contract). Neither the contract, nor the related letter, provide the factual basis for the estimate of 1,100 acres subject to flowage rights. Even without understanding the factual basis, the estimate indicates NEPCO's analysis of the acreage subject to flowage easements is more consistent with the Town' s analysis than TransCanada's analysis in this case. The evidence of the tax stabilization contract weighs in favor of the Town.

FERC License Exhibit K

The Federal Energy Regulatory Commission (FERC) issued the current license for the Wilder Dam on December 10, 1979. Plaintiff's Exhibit 3. The FERC license expires April 30, 2018. *Id.* at 17.

Based upon the testimony of John Ragonese, FERC License Manager employed by TransCanada, the court finds there is a document known as Exhibit K[3] associated with each FERC license. Exhibit K is intended to depict the "project boundary" for the dam. In the current license, FERC stated:

> Exhibit K
>
> NEPCO Exhibit K shows a project boundary which, in general, follows the outer lot lines of lands owned in fee and which follows contour lines, as designated on each drawing, on lands over which NEPCO holds only flowage rights. **NEPCO states that the exact location of the line delineating the outside limits of its flowage rights cannot be determined since its location changes under varying flood, ice, and other conditions.** It also states that it includes in the project all of the rights which it has to flow water over the lands and properties of others. The entire parcels over which NEPCO has flowage rights, however, are not shown as included within the project boundary on the Exhibit K maps.
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> Our staff recommends that NEPCO be required to file a revised Exhibit K to define clearly the limits of the lands and over which NEPCO hold only flowage rights for the project. Article 38 requires NEPCO to file such a revised Exhibit K for approval. The project boundary should be revised to encompass highwater levels, i.e., all lands on which waters flow when the reservoir is at full pond (including increase in the water level in upstream reaches because of backwater effects), and all other land which is necessary for project purposes. Where a flowage easement applies to an entire tract of land and is not otherwise defined, the project boundary may enclose the entire tract.

Id. at 17-18 (emphasis added). FERC's order stated:

> Article 38. Within one year from the date of issuance of this license, the Licensee shall file for approval a revised Exhibit K conforming to the requirements of §4.41 of the Commission's regulations and the order issuing this license and clearly delineating the limits of the lands over which it holds flowage rights for the project.

Id. at 30. Based upon the testimony of Mr. Ragonese, the court finds that NEPCO did revise its Exhibit K. A photocopy of the revised Exhibit K was admitted at trial as Plaintiff's Exhibit 4. The revised Exhibit K

[3] Exhibit K is not a reference to the court's identification letter for an exhibit, but rather it is an identification letter used by FERC.

shows a thick black line close to the river's edge. On December 17, 1980, FERC issued an "Order Approving Revised Exhibit K". Plaintiff's Exhibit 5.

Of course the court cannot relate with precision the position of the thick black line to the miles of riverbank and adjacent land depicted in Exhibit K. However, the thick black line appears very roughly consistent with TransCanada's assertion that 19 acres of easements are contained inside the FERC approved project boundary. From this fact, TransCanada urges the court to conclude that it should be taxed upon only 19 acres. The Town opposes this assertion and argues that the FERC project boundary does not control the issue of taxation for flowage rights.

This court cannot presume to know what the thick black line meant to FERC when it approved the revised Exhibit K, but the court can make some observations. First, it appears FERC required NEPCO to define a boundary that NEPCO claimed could not be "determined since its location changes under varying flood, ice, and other conditions." Revised Exhibit K suggests that NEPCO resolved its dilemma by ignoring the issue of flooding. The thick black line roughly comports with the normal operation of the dam, including backwater effect, but it does not appear to have any relationship to the virtually unlimited number of scenarios that could result during flood events. The thick black line is inconsistent with the vast weight of the evidence showing that marginal flooding due to the dam may occur on land far from the riverbank, depending on the water flow, terrain, etc.

The court finds that the thick black line on the FERC Exhibit K does not enclose all acreage included in TransCanada's flowage easements.

Opinion of Engineer/Appraiser Sansoucy

George Sansoucy is a licensed professional engineer and certified appraiser. He owns George E. Sansoucy, P.E., LLC (GES), based in Lancaster and Portsmouth, N.H. GES employs 15 people and provides engineering and appraisal services for special purpose utility properties. TransCanada stipulated to Mr. Sansoucy's expertise.

GES appraised the value of TransCanada's flowage easements in Newbury during 2010. At that time, GES valued the easements at $1,472,800. The State of Vermont hired GES to update its appraisal of the TransCanada easements to April 1, 2012. "The purpose of the assignment is to express an 'as is' retrospective opinion of market value for the subject properties as of April 1, 2012." Defendant's Exhibit A, page 2.

Mr. Sansoucy concluded that TransCanada owns flowage easements by deed or by prescription within Newbury totaling approximately 1,964 acres. *Id.* at 5. In reaching this conclusion, Mr. Sansoucy reviewed 27 deeds, 1 master deed covering 13 other deeds, and the FERC Exhibit K maps. Transcript, page 207. After reviewing these documents, he closed boundaries left open on the Exhibit K maps and used a planimeter[4] method to estimate the number of acres that were inundated (perpetually under water) and normally dry, but inside the area that in his opinion included the Wilder Dam project area shown the Exhibit K maps. Defendant's Exhibit A, pages 5-6.

[4] As explained in Mr. Sansoucy's testimony, "planimeter . . . is a fancy word for just measure the area, and then translate that measured area into acres." Transcript, page 204.

The court finds Mr. Sansoucy is a competent professional engineer, and he is credible. The planimeter method used by Mr. Sansoucy is accurate, but it has a higher margin of error than more modern methods of measuring land area, such as the methods used by TransCanada's engineer.

Mr. Sansoucy testified that all acreage subject to deeded easements should be included in the taxable acreage. Although the evidence is not completely clear on this issue, Mr. Sansoucy may have improperly included in his estimate some acres that cannot be flooded[5] by the Wilder Dam. The court is persuaded by TransCanada's expert that "backwater effect" diminishes to the point of being inapplicable or negligible in extreme flooding, such as flooding above the 100 year line. Although by deed a flowage easement may exist over these higher grounds, the easement would have no value if no flooding could occur as a result of the Wilder Dam. Therefore, any acreage above the 100 year flood line should not be included in the formula (acres multiplied by value/acre).

In sum, Mr. Sansoucy used reliable methods to determine the acreage included in TransCanada's flowage easements, but he may have included some acres above the 100 year flood line where no flooding could occur as a result of the Wilder Dam's backwater effect.

Opinion of Engineer/Hydro-Geologist Robinson

Elizabeth C. Robinson is a licensed professional engineer and hydro-geologist. She holds a Bachelor of Science degree in civil engineering, and has completed graduate courses in civil engineering hydrology and geology. She holds a Master's degree in land planning, community planning, and development. She is employed by GEI Consultants (GEI), a consulting firm that employs scientists, engineers, and ecologists. GEI employs over 600 people in 30 offices across the U.S. Ms. Robinson works in the areas of hydrology and hydraulics, both as it pertains to surface water and ground water. She performs inundation studies associated with flood events occurring in natural and man-made channels. The court finds Mr. Robinson qualified as an expert in the areas pertinent to her testimony in this case.

TransCanada hired GEI to evaluate the inundation under normal flow scenarios and under various flood flow conditions on the Connecticut River from just above the Wells River to the Wilder Dam. Ms. Robinson was assigned to the project.

Ms. Robinson used software known as the Hydrologic Engineering Centers River Analysis System (HEC-RAS) to evaluate the impact of the Wilder Dam upon the Connecticut River and adjacent lands in Newbury. The software was developed by Army Corps of Engineers and its use has become widespread. The HEC-RAS model involves a series of equations: the continuity equation; the energy equation; and the flow resistance equation. The model involves a user interface that allows entering data, such as various flows. The model recognizes topography and bathymetry of a river channel in evaluating how water flows through a channel. The terrain data used by Ms. Robinson was obtained through an aerial LIDAR survey. LIDAR has a vertical accuracy within 0.4 feet across a one meter cell. The bathymetry data was obtained from a survey using boats in the impoundment area. The bathymetry data has a vertical accuracy within 0.1 feet across a five meter cell.

Ms. Robinson testified that under normal flow conditions, the Wilder Dam's backwater effect causes 19 acres to be inundated with water. As water flow increases, the 19 acres increases to a

[5] Transcript, page 258.

maximum of almost 33 acres. As water flow increases even more, the backwater effect is diminished and the inundated area due to backwater decreases to about 3 acres, plus or minus one acre, at the 100 year flood level. Plaintiff's Exhibit 9 (the exhibit shows 32 acres, but Ms. Robinson testified that she should have rounded up to 33 acres for the 1.1 year flood). The court finds Ms. Robinson credible and reliable in this analysis.

However, the small number of acres flooded by the dam at any one moment may occur over a very large number of acres. In concept the flooded area caused by the dam is a relatively narrow meandering strip of land along a 15 mile stretch of river. As water rises during a flood, there's a small area of flooding at the water's edge caused by the dam's backwater effect. When the natural flooding increases, the area of flooding caused by backwater effect pushes the water's edge out a bit more. When the water's edge naturally recedes, the flooded area due to the dam's backwater effect recedes with it. In sum, the small number of acres is based upon a single moment in time. The large number of acres is the cumulative area affected at every moment from the beginning of a flood event to the end of that flood event.

TransCanada argues that only the small number of acres is important because most of the land would be flooded naturally in any particular flood, except for the small number of acres at the peak water level. For example, TransCanada argues that a crop under 9 feet of water is similarly situated to a crop under 9 feet 1 inch of water, referring to land not at the water's edge. This argument ignores the fact that every acre of land floods a bit sooner because of backwater effect. Similarly, every bit of land stays wet a bit longer as the water recedes. Thus, all land flooded is wet longer because of the Wilder Dam. It's not simply a matter of water depth. The time under water also is enlarged.

Another problem with TransCanada's argument is that each flood event is unique and each flood event may have a different peak level. Even if the court were to consider flooding caused by the dam only at the peak of each flood, two floods could have two very different peaks, and the two narrow strips of land may overlap only partially or not at all. Each subsequent flood may continue to add to the cumulative area flooded by the dam.

Ms. Robinson calculated the total area inundated during the operation of the Wilder Dam at several different flows. *Id.* Under normal operating conditions with river flow of 10,700 cubic feet per second (cfs), 335 acres are inundated. During a 1.1 year flood event with river flow of 27,878 cfs, 663 acres are inundated. During a 100 year flood event with river flow of 78,197 cfs, 2,170 acres are inundated. However, 311 acres would be inundated even under normal conditions without the Wilder Dam. Plaintiff's Exhibit 9. The court finds Ms. Robinson credible and reliable in this analysis.

Weighing the Evidence Re: Acreage

The court assigns more weight to Ms. Robinson's analysis than any of the other evidence related to measuring the acreage subject to TransCanada's flowage rights in the Town of Newbury. Her analysis involved a more reliable method than the planimeter method used by Mr. Sansoucy. The court gives no weight to the revised FERC Exhibit K maps showing a thick black line as the project boundary because the line appears to completely ignore inundation during flood events. The tax stabilization contract and related correspondence recognize that a substantial number of acres (1,100) are affected, but also that an engineering study should be performed. Thus, the contracted estimate of acreage is at most a rough estimate. While the deeds are important, they alone do not reveal the number of acres affected.

In sum, the court finds that TransCanada's flowage easements contain 2,170 acres based upon 100 year flood line, less 311 acres that would be inundated even without the Wilder Dam. TransCanada's flowage easements cover 1,859 acres.

VALUE PER ACRE

The evidence includes two appraisals:

1. TransCanada's appraisal by George Silver of George Silver & Associates. Mr. Silver estimates the value at $500 per acre. Plaintiff's Exhibit 16, page 70.

2. State's appraisal by George Sansoucy of George E. Sansoucy, P.E., LLC. Mr. Sansoucy estimates the value of flowage rights at $1,100 per acre. Defendant's Exhibit A, page 52.

Both appraisers acknowledge the three most common approaches to appraisal: cost, income, and comparable sales. Both appraisers rejected the cost approach because flowage easements contain no improvements to land. Plaintiff's Exhibit 16, page 46; Defendant's Exhibit A, page 41. Both appraisers rejected the income approach because the income generated from flowage easements is produced only through a combination of those easements with other property (e.g. the Wilder Dam and power generating equipment). Plaintiff's Exhibit 16, page 48; Defendant's Exhibit A, page 50. Both appraisers based their valuation on the sales comparison approach.

The appraisers were enlisted to perform a very difficult task. Each was hired to estimate the value of property where the only applicable common method of appraisal requires a market from which sales data may be extracted. Yet flowage rights rarely are transferred. Flowage rights are by their very nature useful to only a small number of entities, such as hydropower companies, and thus few transactions occur. Even when transactions do occur, flowage rights generally are purchased by entities that possess legal authority to compel a sale should the need arise. Despite the difficulty of the task, appraisers must gather and analyze limited available data about the value of easements bought and sold. In this decision, the court in some respects criticizes the work of each appraiser. This criticism arises from the necessity of fact finding, and is not intended to censure the appraisers. Both appraisers obviously are well qualified and diligent.

Silver Appraisal

TransCanada directed Mr. Silver to appraise as of April 1, 2012, an area of 24 acres inundated within the Town of Newbury as a result of normal operations at the Wilder Dam. His initial appraisal issued July 31, 2014, included this 24 acre assumption. Plaintiff's Exhibit 16, Extraordinary Assumption No. 7, page xxvii.

Subsequent to that appraisal, TransCanada requested Mr. Silver to clarify whether modifying the assumption to allow for up to 60 acres of flowage easements would materially alter his per acre valuation. On April 29, 2015, Mr. Silver provided a second appraisal as of April 1, 2012, indicating that his $500 per acre valuation would not materially differ for flowage easements greater than 24 acres, but less than 60 acres. State's Exhibit 18.

At trial, Mr. Silver testified that he had no opinion as to the value of flowage easements exceeding 60 acres. Transcript, pages 167-176. Considering the court finds the flowage easements affect a much larger area than the initial and modified assumptions, TransCanada arguably has not

provided a relevant appraisal. However, the court has considered the appraisals and will make appropriate findings.

Mr. Silver did not locate any sales of flowage easements that he considered to be arms-length transactions. His view is that all potentially comparable sales were inappropriate for consideration because the sale price was established through condemnation or under threat of condemnation. Mr. Silver indicated that sales in this context may be at a price higher or lower than a free market value. Considering this scenario, Mr. Silver engaged in three analyses to *infer* a valuation, rather than consider actual valuations based upon documented transactions.

In the first stage of the analysis, Mr. Silver considered whether flowage easements contribute to the market value of total hydroelectric generation projects. Plaintiff's Exhibit 16, page 49. He found that sales of 16 projects with flowage rights had a mean sale price of approximately $1,860,000 per installed megawatt capacity, and that sales of 13 projects without flowage rights had a mean sale price of approximately $1,670,000 per installed megawatt capacity. Thus, flowage rights initially appeared to produce added value of $190,000 per megawatt. *Id.* at 59.

However, Mr. Silver continued his analysis to determine whether the $190,000 difference was statistically valid. Based upon F-Test and t-Test results, he concluded the "means are not statistically different at the 99% Confidence interval". *Id.* at 60. "It may be inferred from this statistical analysis, that market participations for hydroelectric generation projects, do not consider the presence or absence of flowage and /or ponding rights as a **significant** component of market value for such projects." *Id.*

The court notes Mr. Silver's reasoning is based upon analysis at the 99% confidence interval. His report does not consider the statistical validity of the means at lower confidence intervals, such 90% or 80%. The court is unaware of whether customary appraisal practices prohibit consideration of confidence intervals below 99%.

Rather than completely casting aside the analysis due to the lack of statistical validity at the 99% confidence interval, the court finds the difference in the mean sales price of $190,000 per installed megawatt capacity deserves at least some weight, and it should be considered together with other evidence of valuation.

In the second stage of the analysis, Mr. Silver compared "market values of competitive acreage both with and without flowage rights." *Id.* at 49. He considered 15 agricultural land sales, including 7 sales containing "tillable acreage found in floodplains subject to use restrictions similar to those found within the subject property rights" and 7 sales containing "tillable acreage found in areas not located in floodplains and encumbered by flowage rights easements. The remaining collected sale property had tillable acreage found both inside and outside of a floodplain area." *Id.* at 63. The analysis showed that "floodplain tillable lands actually contribute approximately 2.0% more per acre than tillable lands found outside of a floodplain", but Mr. Silver did not consider this to be significant. *Id.* at 66.

In the third and final stage of the analysis, Mr. Silver conducted a "market survey of limited utility acreage similar to underlying lands impacted by the subject flowage rights." *Id.* at 49. He considered 87 sales of "limited utility acreage" between 2004 and 2013. "Sales which sold for more than $1,000 per acre were not considered to be limited utility acreage sales." *Id.* at 67. The mean time-

adjusted sale price was $645 per acre. Ultimately, Mr. Silver expressed his opinion that the "market value of the subject flowage easement, on a per acre basis is $500 per acre, as of April 1, 2015."

In his testimony, Mr. Silver was clear that his $500 per acre valuation was for total easements covering less than 60 acres. He excluded land selling for over $1,000 an acre. He assumed "the areas impacted by the subject flowage easements are situated upon limited utility lands which are steeply banked and/or low lying wetlands". Id. at 72. Considering the court finds the subject flowage easements in fact cover a much larger area, Mr. Silver's estimate of $500 per acre should receive minimal weight. Most of the acreage covered by the easements is in fact high quality agricultural land.

In sum, the court does not find the Silver appraisal reliable for the purpose of assessing the value of TransCanada's flowage easements within the Town of Newbury. At most, the appraisal shows that flowage rights tend to increase the sale price per installed megawatt for hydroelectric projects, and that flowage easements on limited utility acreage may have a value of approximately $500. Considering most of the area covered by easements in this case is not contained within limited utility acreage, the court cannot assign a value to TransCanada's flowage easements based upon this appraisal.

Sansoucy Appraisal

Mr. Sansoucy's sales comparison analysis method differed from Mr. Silver's. Mr. Sansoucy evaluated actual sales of flowage easements. He considered 26 sales in southern Vermont and New Hampshire, and northwestern Massachusetts. Defendant's Exhibit A, page 45. These easements were not transferred through condemnation proceedings, but the purchaser had the authority to use condemnation proceedings.

TransCanada argues that the court should not, and cannot, consider these sales because any sale compelled through condemnation or under the threat of condemnation is not an arms-length transaction. Although the court agrees with the principles behind TransCanada's argument, it does not agree with TransCanada's position under the facts in this case. In the State of Vermont's Post-Trial Memorandum, the State thoroughly briefed the issue, and the court finds the State's argument persuasive. The State's argument provided at pages 17-23 of its memorandum is incorporated by reference into this decision. The court admits the evidence of the 26 sales identified by Mr. Sansoucy, but shall give those sales only such weight as is explained below.

Mr. Sansoucy used three "Value Indicators" in making his appraisal.

1. Indicated Value from the Median Inflation Adjusted Comparable Sales Adjusted for Location in Orange County ($1,300/acre) rounded.
2. Indicated Value from the Median reported Comparable Sales Adjusted for Location in Orange County ($969/acre) rounded.
3. Indicated Value from Reported Sale Price of Sale #23 ($836/acre) rounded.

Id. at 52. Mr. Sansoucy indicated the $1,100 per acre estimate "falls about midway between the low indicated value and the high indicated value." *Id.*

Although the court has admitted the 26 sales into evidence, many of these sales appear not to support Mr. Sansoucy's analysis. For example, sales numbered 2 through 9 each show a sales price of

$350 with acreage ranging from 0.040 acres to 0.330 acres. *Id.* at 45. The data strongly suggests that the identical sale price of $350 had no relationship to the acreage involved in the sales. The smallest acreage is about one-eighth the size of the largest acreage, yet the price is the same. The tiny size of these parcels indicates that the price was in the nature of a flat-price per sale, and not a price per acre burdened by the easement.

More than half (14 of 26) of these sales transferred a mere fraction of an acre of flowage easement. Including such small sales in the analysis dramatically increases both the mean and median averages. In contrast to these small sales, the easements at issue in this case are much larger in size. TransCanada acquired easements through 27 deeds, plus one master deed containing 13 other deeds. Therefore, TransCanada acquired 40 easements. The court found that over 1,800 acres are included in the easements, suggesting an average size of more than 40 acres per easement. The small sales included in the appraisal simply are not sufficiently comparable to be given any weight.

The appraisal includes values adjusted for inflation. Mr. Sansoucy used a conservative inflation estimate of 2.5% per year. He footnoted a webpage at InflationData.com in support of this figure. Id. at fn. 37. The court checked the cited webpage and found that the inflation rates are based upon the consumer price index. Yet flowage easements are neither a consumer good, nor consumer service, as might be included in the CPI. The inflation rate used by Mr. Sansoucy may coincidentally be appropriate for flowage easements, but the cited authority for the inflation rate is not appropriate. The CPI does not measure inflation of flowage easements.

The appraisal shows a summary of vacant land sale prices per acre for Orange County between 2005 and 2011. *Id.* at 48, Table 4. Sales involving fewer than 100 acres were excluded. *Id.* at 47. Notably, the mean price per acre in 2005 was almost double the mean price per acre in 2011, and the median price per acre in 2005 was more than double the median price per acre in 2011. The court is not finding that land prices in general must control the inflation rate for flowage easements, but this data adds to the court's concern about the validity of the inflation factor used in Mr. Sansoucy's analysis.

Considering both the sub-acre sized easements likely not priced according to acreage were included, and considering the inflation factor is based upon a measure not related to the price of flowage easements, the court gives no weight to the first two "value indicators" included in the appraisal.

The one remaining value indicator is the sale price of $836 per acre for an easement that burdens 83.7 acres. The court is persuaded that this value indicator is an appropriate consideration in determining the value of flowage easements. Also, it is the best value indicator offered by either appraisal. In sum, the court disregards Mr. Sansoucy's two higher value indicators as unreliable. The court finds that Mr. Sansoucy's third, and lowest, value indicator provides a reliable indication of value for flowage easements within the Town of Newbury.

CONCLUSIONS

This is a property tax appeal of the Town of Newbury's assessment of the value of Plaintiff's flowage easements associated with the Wilder Dam. A town's valuation of property for taxation purposes under 32 V.S.A. § 4467 must reflect the fair market value of the property, reduced or increased if necessary to correspond to valuations of comparable properties. See *New England Power Co. v. Town*

of Barnet, 134 Vt. 498, 505 (1976). Fair market value is the price the property would command in an arm's length transaction between a willing buyer and a willing seller, "taking into consideration all the elements of the availability of the property, its use both potential and prospective, any functional deficiencies, and all other elements such as age and condition which combine to give property a market value." 32 V.S.A. § 3481; see also *Town of Barnet v. New England Power Co.*, 130 Vt. 407, 411 (1972).

An appeal to the Superior Court of a town's valuation of property is a *de novo* proceeding. 32 V.S.A. § 4467. On appeal, the town has the initial burden to produce evidence of the fair market value of the property. *Sondergeld v. Town of Hubbardton*, 150 Vt. 565, 568 (1988). If that burden of production is met, there is a presumption that the appraisal is valid and the taxpayer has the burden to overcome the presumption. *Kruse v. Town of Westford*, 145 Vt. 368, 371–72 (1985). "A taxpayer satisfies this burden when he introduces credible evidence fairly and reasonably tending to show that [the] property was appraised at more than its fair market value." *Id.* The taxpayer's burden of proof is not met by "simply impugning the [town's] methods or questioning its understanding of assessment theory or technique." *Id.* If the taxpayer meets its burden, the "presumption of validity disappears, and the town, to prevail, must produce evidence to justify the appraisal." *Leroux v. Town of Wheelock*, 136 Vt. 396, 398 (1978). In other words, the town must produce evidence demonstrating the validity of its fair market value determination. *New England Power Co.*, 134 Vt. at 507. Even if the taxpayer refutes the presumption of validity, the taxpayer retains the burden of persuasion as to all contested issues. *Sondergeld*, 150 Vt. at 568; see also *New England Power Co.*, 134 Vt. at 508.

The evidence in this case demonstrates that TransCanada's predecessor agreed in 1997 that it owned approximately 1,100 acres of flowage easements within the Town of Newbury. The evidence shows that Mr. Sansoucy analyzed the deeds and Exhibit K maps, and he concluded more accurately that the easements covered approximately 1,964 acres. TransCanada's engineering study largely confirmed Mr. Sansoucy's estimate, but showed even more accurately that 1,859 acres lie within the 100 year flood line, and that the Wilder Dam's backwater effect essentially ceases to exist above that line. Considering the margin of error in the engineering study and the rarity of flooding above the 100 line, the court concludes that deeded easements, if any exist, above the 100 year flood line have no value.

Mr. Sansoucy offered three value indicators based upon 26 actual sales. Many of those sales strongly indicate that acreage had no bearing on price. For example, 8 easements were purchased by the same buyer at the flat rate of $350. The smallest acreage was about one-eighth the size of the largest acreage, and all sales were for a fraction of an acre. The flat rate skewed Mr. Sansoucy's appraisal upward through two of his three value indicators. Since the parties agreed to a formula for valuation that requires calculating the number of acres by a constant price per acre, it was improper to include sale prices that obviously were disconnected from the acreage involved. Not surprising, the tiny sales produced the highest prices per acre. The court cannot appropriately rely on the first two value indicators in Mr. Sansoucy's appraisal.

However, Mr. Sansoucy's third value indicator was based upon a sale in 1990 of an easement covering 83.7 acres at $836 per acre. The size of this easement is far more comparable to the easements involved in this case than the sub-acre sized easements referenced above. However, a consideration that suggests $836 per acre may be too high is that most other easement sales of more than one acre had lower prices per acre, and a consideration that suggests this value may be too low is that the price per acre is not adjusted for inflation. Although the court notes that inflation is an

appropriate issue for consideration, Mr. Sansoucy did not provide the court a suitable inflation measure. The CPI may perhaps mirror inflation related to flowage easements, but no evidence was presented to support such an assumption. And the data from Orange County land sales indicated that deflation may have occurred between 2005 and 2011.

The court concludes the Town met its initial burden to produce evidence that TransCanada owns 1,859 acres of flowage easements valued at $836 per acre. The presumption of validity applies to a total valuation of $1,554,124.

TransCanada did not overcome the presumption. TransCanada's appraisal was not reliable or persuasive. A critical assumption, as directed by TransCanada, in Mr. Silver's appraisal was that the easements were limited to 24 acres. The assumption was later modified, but Mr. Silver's valuation continued not to apply to easements totaling 60 or more acres. The initial and modified assumptions restricted the appraisal to limited utility land of poor quality at the river's edge. In contrast, the evidence showed that the vast majority of the easements burdened high quality agricultural land. Thus, the appraisal offered little insight to the value of the easements. At most, Mr. Silver's appraisal showed the easements should be valued at some unknown amount in excess of $500 per acre.

Therefore, the court concludes that the value of TransCanada's flowage easements as of April 1, 2012, is $1,554,124. Applying the stipulated common level of appraisal of 98.59% to the court's determination of value indicates that the listed value of TransCanada's flowage easements within the Town of Newbury should be $1,532,211.

ORDER

1. The Newbury Listers shall set the appraised value of TransCanada's flowage easements located within the Town of Newbury in the grand list at $1,532,211 as of April 1, 2012, and for the two next ensuing years pursuant to 32 V.S.A. § 4468.
2. The Superior Court Clerk shall forward by certified mail one copy of this determination to the taxpayer, one copy to the Commissioner, and one copy to the Newbury Town Clerk.
3. The Newbury Town Clerk shall record this determination in the book in which the appeal was recorded under 32 V.S.A. § 4461.

So ordered.

Electronically signed on January 19, 2016 at 2:20 PM pursuant to V.R.E.F. 7(d).

Michael C. Pratt
Specially Assigned Judge

Joyce E. McKeeman
Assistant Judge

Victoria N. Weiss
Assistant Judge

2017 VT 117

No. 2016-061

TransCanada Hydro Northeast, Inc.

v.

Town of Newbury,
State of Vermont

Supreme Court

On Appeal from
Superior Court, Orange Unit,
Civil Division

January Term, 2017

Michael Pratt, Acting, J., Specially Assigned

Robert E. Woolmington of Witten, Woolmington, Campbell & Bernal, P.C., Manchester Center, for Plaintiff-Appellant.

William H. Sorrell, Attorney General, William E. Griffin, Chief Assistant Attorney General, and Mary L. Bachman, Assistant Attorney General, Montpelier, for Defendant-Appellee State.

Jon T. Anderson of Burak Anderson & Melloni, PLC, Burlington, for Defendant-Appellee Town of Newbury.

PRESENT: Reiber, C.J., Dooley, Skoglund, Robinson and Eaton, JJ.

¶ 1. **DOOLEY, J.** Taxpayer TransCanada Hydro appeals a decision of the Orange County Superior Court valuing flow easements that taxpayer owns over land in the Town of Newbury at $1,532,211 for property tax purposes. Taxpayer owns and operates the Wilder Dam on the Connecticut River in Hartford, Vermont, downstream from Newbury, and the flow easements give taxpayer the right to flood land abutting the river in Newbury. As discussed in the

body of the opinion, taxpayer challenges the valuation as unsupported by the admissible evidence and the court's reasoning. We affirm.

¶ 2. The Connecticut River, which flows from north to south, forms the boundary between the State of Vermont and the State of New Hampshire. The Wilder Dam rises above the river holding back water to a height of 385 feet above sea level.[1] Its presence affects the amount of flooding of upstream land abutting the river at least with respect to land at or below the level of the top of the dam. See Petition of Citizens Utilities Co., 117 Vt. 285, 289, 91 A.2d 687, 691 (1952) ("When a dam is erected across a river it sets the water back against the upstream river banks and over them to at least the level that the surface of the water is maintained at the dam."). At least some of the abutting land in Newbury is below the level of the dam even though the southern boundary of the Town is forty-three miles upstream of the dam and the Town extends eight miles up the river.

¶ 3. Erection of a dam such as to cause intentional flooding of the upstream land abutting the river is a trespass. See Restatement (Second) of Torts § 158 cmt. i, illus. 5 (1965). In essence, a flow easement is a right to commit that trespass, transforming an entry that would otherwise be a trespass for which the entrant was liable into a permitted entry for which the entrant bears no liability as long as the terms of the easement are not exceeded. See White River Chair Co. v. Conn. River Power Co., 105 Vt. 24, 52, 162 A. 859, 870-71 (1932); Mower v. Hutchinson, 9 Vt. 242, 249 (1837). It is an interest in real property. See White River Chair Co., 105 Vt. at 52, 162 A. at 870 ("As to the flowage rights, the defendant, as against the plaintiff, will be considered as the owner of the land."); 32 V.S.A. § 3605 ("The interest of an owner in . . . flowage rights . . . shall be appraised and set in the grand list as real estate to the owner of such rights.").

[1] This height is imposed by the Federal Energy Regulatory Commission (FERC) license.

¶ 4. The flow easements being valued in this case were deeded to taxpayer's predecessor by the landowners in 1949 and 1950 when the Wilder Dam was being built. The typical flow easement deed provides:

> I . . . do give, grant, bargain, sell and convey unto said New England Power Company . . . the perpetual right and easement to flow and other-wise damage so much of the hereinafter described land with the buildings and personal property thereon as may be flowed and damaged by reason of the construction, maintenance and operation (as hereinafter provided) of the dam of the Grantee across the Connecticut River between the towns of Hartford, . . . Vermont and Lebanon, . . . New Hampshire . . . ; the elevation of the spill-way section of such dam . . . not to exceed an assumed elevation of 385 feet . . . ; said dam and its appurtenant facilities to be so constructed and operated that the elevation of the water of said River at said dam will not exceed Elevation 385 feet when the flow of said River at said dam is 140,000 cubic feet per second or less.

It goes on to say that the lands covered by the easement "are all [of the grantor's] lands bordering on the Connecticut River" in Newbury and describes the lands in relation to prior deeds.

¶ 5. Certain points about the flow easements are important to the resolution of this case. First, the height limit is applicable to the height of the dam and the water contained by the dam and not to the height of the lands subject to the flow easement. Thus, part or all of the subservient lands covered by a particular deed may lie above the level of the dam such that flooding of those lands caused by the dam alone is far less likely. In general, the easement is applicable to all land owned by the grantor and abutting the river and not just that land that was determined to be subject to flooding. Further, the evidence in this case was that the subservient land is productive farmland, and is actively used as such, although spring planting may be delayed by flooding and there is a risk of later destruction of plantings by extreme weather events that could bring flooding at any time. There was also evidence that although the height of the surface of the water behind the dam could not exceed 385 feet, it was actually maintained at a level between 380 and 385 feet and particularly at the former when the flow in the river was high.

¶ 6. Relying upon expert witnesses, the parties used different methodologies to value the flow easements in Newbury. The following is a simplified description of these methodologies. More detail is provided in the analysis below.

¶ 7. Taxpayer took the position that the value could not be based on comparable sales of flow easements because no evidence of comparable sales existed, and sale prices are influenced by the right of the dam owner to take such easements by eminent domain. Instead, taxpayer retained a hydrological firm to model the river flow with and without the Wilder Dam using software that had been approved by FERC for such modeling. The modeling was done at various flow rates of the river. At a "normal" flow rate of 10,700 cubic feet per second, the model found that nineteen more acres along the river in Newbury were flooded with the presence of the dam than without the presence of the dam. It found that at a flow rate between 30,000 and 35,000 cubic feet per second the flooded acreage attributable to the dam reached thirty-three, while three more acres were flooded because of the dam at the hundred-year flood flow rate of 78,197 cubic feet per second.

¶ 8. Taxpayer also retained an appraisal expert who divided the land along the river into two categories: (1) land that abutted the river up to sixty acres in the Town, called "limited utility" land; and (2) land in the Town further from the river subject to deeded flow easements. Applying the results of the hydrologist's study, the appraisal expert valued only the land the hydrologist found was flooded solely because of the presence of the dam—all of which was limited utility land—at $500 per acre based on sales of comparable limited utility land along the river. Because the appraisal expert could not separate the value of the flow easements over that land from the value of the fee interest, he maximized the value of the flow easements by attributing all the sales value to the easements. Although he looked at comparable values of dams with and without flow

easements and land with and without flow easements, the appraisal expert could not derive value from these analyses. Consistent with taxpayer's position that only flow easements over land along the river that was flooded solely because of the dam have value, he valued all the flow easements in the Town at $9500, computed by multiplying the number of acres flooded solely as a result of the dam at the "normal" flow level of the river—nineteen acres—by $500, the value of limited utility land per acre.

¶ 9. The Town's theory and evidence was very different, arriving at a much larger value. The Town's expert witness, an appraiser specializing in utility property, reviewed the deeds and other documents to determine how much acreage was subject to flow easements and arrived at a coverage area of 1964 acres. Because the easements gave taxpayer the same or similar rights with respect to each acre covered, the Town's expert witness valued each acre the same, irrespective of location or likelihood of flooding. The Town's appraiser found and relied on the per acre price of sales of flow easements in connection with the addition of a pumping station on the Connecticut River in Massachusetts, using them as comparable sales to arrive, with adjustments, at the per acre value of flow easements held by taxpayer at $1100 dollars for a total value of $2,160,000 in Newbury.

¶ 10. The trial court concluded that the presence of the dam always contributes to some degree, however small, in the duration and depth of flooding so taxpayer is always liable, at least in part, for all flooding. It subtracted out the flooding of any acreage that was outside the hundred-year flood line because it accepted the testimony of taxpayer's hydrology witness that the dam had an insignificant impact on the extent of flooding at that level. The court generally agreed with the approach of the Town's appraiser and valued taxpayer's flow easements based on sales of flow easements. However, it accepted only one of the twenty-six comparables selected by the Town's

appraiser, a sale in 1990 of a flow easement over 83.7 acres of land that was priced per acre. It set the per acre value of taxpayer's flow easements at the sales price of that comparable, $836 per acre. It declined to adjust that price for inflation because it was unconvinced that the inflation adjustment methodology of the Town's expert witness, based on the Consumer Price Index, applied to flow easements. It reached a valuation of $1,532,211.

¶ 11. Although the positions of the parties rely on factual differences, they further involve fundamental differences in the applicable law. Two legal issues are central to the resolution of this case: (1) on the record in this case, can flow easements be valued at a uniform per acre rate over all of the land over which taxpayer has an easement, and (2) if so, was the per acre value properly determined based on using a sale of a flow easement in 1990 in a Massachusetts transaction?[2]

[2] In addition to taxpayer's challenge to the merits of the trial court decision, taxpayer argues that the court violated 4 V.S.A. § 457 because the assistant judges signed the final decision of the court including the conclusions of law. See id. § 457(b) ("In all proceedings, questions of law shall be decided by the presiding judge. Mixed questions of law and fact shall be deemed to be questions of law. The presiding judge alone shall decide which are questions of law, questions of fact, and mixed questions of law and fact."). Section 457 applies to actions in family court only; however, 4 V.S.A. § 36 includes the same provision. See id. § 36(b) ("In all proceedings, questions of law shall be decided by the presiding judge. . . . Mixed questions of law and fact shall be deemed to be questions of law. The presiding judge alone shall decide which are questions of law, questions of fact, and mixed questions of law and fact."). Both sections also provide that "participation by an assistant judge in a ruling of law shall [not] be grounds for reversal unless a party makes a timely objection and raises the issue on appeal." Id.; id. § 457. The intent of the statute is to give the presiding judge an opportunity to correct a participation error prior to an appeal to this Court. Parties can know there is a participation question only after the decision is issued and, as here, the nature of assistant judge participation is not specified in the decision. Thus, the Legislature must have intended that a party would preserve a claim of participation error by a post-decision motion, giving the trial judge the opportunity to dispel any claim of improper participation if possible. Taxpayer failed to file such a motion or otherwise object to assistant judge participation in the overall decision. Therefore, under the statute, taxpayer may not raise this issue for the first time in this Court.

¶ 12. Before we reach those questions, we lay out the shifting burdens of production and persuasion that apply in property valuation cases, and the standard of review, a subject we return to at the end of this opinion. Whether an appeal is before the state appraiser or, as here the superior court, the case is considered de novo. 32 V.S.A. § 4467. A town has the initial burden of production to produce evidence that the property was appraised at fair market value. In re Bilmar Team Cleaners, 2015 VT 10, ¶ 10, 198 Vt. 330, 114 A.3d 483. Once it has done so, a presumption of validity attaches. Id.; Vanderminden v. Town of Wells, 2013 VT 49, ¶ 8, 194 Vt. 96, 75 A.3d 598. This is a "bursting bubble presumption" that disappears if the taxpayer presents admissible evidence to show that the value exceeds fair market value. Vanderminden, 2013 VT 49, ¶ 8. At that point, the burden of production shifts to a town to show its valuation is correct, but the burden of persuasion always lies with the taxpayer. Id.

¶ 13. On appeal to this Court, the superior court's conclusions will be affirmed if reasonably drawn from the evidence. In re Bilmar Team Cleaners, 2015 VT 10, ¶ 8. As with other types of civil cases, we defer to the superior court's determination of credibility and evidentiary weight and persuasiveness. Id.

¶ 14. We return to the critical questions for this appeal. Taxpayer's first argument is that "[t]he trial court erred in assigning a uniform value to every acre within the 100-year flood plain when the record was undisputed that flowage easements did not affect the fair market value of the underlying fee in virtually all that area." Because the Town and the State have argued that this argument was not preserved, it is important to describe it and its context more specifically. At the start of the trial in this case, the trial judge attempted to define and narrow the issues. He indicated that he understood that the per acre value of the flow easements was uniform across all the acreage covered by the easements. Taxpayer's counsel agreed to this understanding, and the trial judge

used it in putting together his decision. During the trial, the only exception to this understanding was taxpayer's argument that the value of the flow easements over all but the small amount of acreage that could be attributed to the dam was zero; this argument was clearly preserved. The court added a second exception when it held that flow easements over land beyond the 100-year flood line had no value. In its reply brief, taxpayer responded to the nonpreservation argument making clear that it agreed that the per acre value of the flow easements was uniform except where the evidence showed that a particular part of the land was covered by a flow easement that had a value of zero. This position covered both the land beyond the 100-year flood line as the court found and the land beyond the acreage the hydrologist found was flooded as a result of the presence of the dam. With this explanation, we agree that taxpayer's position was preserved and is properly before us.

¶ 15. The uniform value understanding was consistent with the Town's position. It argued that every acre covered by the flow easements should be valued the same based on the testimony of its appraiser. His position was that the value was based on the immunity from suit provided by the flow easements, and that value was uniform across the acreage irrespective of whether the flooding was actually so extensive that it would reach every acre. The Town's appraiser also argued that differences in the value of a flood easement over different acres was approximated by using the median per acre sales price of the comparables, which themselves showed substantial differences in per acre value.

¶ 16. The trial court relied on the testimony of taxpayer's hydrologist but reached a very different conclusion from the hydrologist on the significance of her conclusions. Its rationale was as follows:

> However, the small number of acres flooded by the dam at any one moment may occur over a very large number of acres. In concept the flooded area caused by the dam is a relatively narrow meandering strip of land along 15 mile stretch of river. As water rises during a flood, there's a small area of flooding at the water's edge caused by the dam's backwater effect. When the natural flooding increases, the area of flooding caused by backwater effect pushes the water's edge out a bit more. When the water's edge naturally recedes, the flooded area due to the dam's backwater effect recedes with it. In sum, the small number of acres is based upon a single moment in time. The large number of acres is the cumulative area affected at every moment from the beginning of a flood event to the end of that flood event.
>
> TransCanada argues that only the small number of acres is important because most of the land would be flooded naturally in any particular flood, except for the small number of acres at the peak water level. For example, TransCanada argues that a crop under 9 feet of water is similarly situated to a crop under 9 feet 1 inch of water, referring to land not at the water's edge. This argument ignores the fact that every acre of land floods a bit sooner because of backwater effect. Similarly, every bit of land stays wet a bit longer as the water recedes. Thus, all land flooded is wet longer because of the Wilder Dam. It's not simply a matter of water depth. The time under water also is enlarged.
>
> Another problem with TransCanada's argument is that each flood event is unique and each flood event may have a different peak level. Even if the court were to consider flooding caused by the dam only at the peak of each flood, two floods could have two very different peaks, and the two narrow strips of land may overlap only partially or not at all. Each subsequent flood may continue to add to the cumulative area flooded by the dam.

The court found, however, that the dam would have no effect on flooding at or beyond the 100-year flood level and subtracted out the acres provided in the deeds that were above the 100-year flood level. Thus, the trial court found that 1859 acres should be considered in valuing the flow easements, 311 acres fewer than provided in the deeds.

¶ 17. While the flow easements are real property, their value lies in the avoidance of liability for the continuing trespass attributable to the dam as it causes water to flow over the river banks and onto the land beyond them. For that trespass, a taxpayer would be liable for any

resulting loss of land value, plus loss of use of the land, however temporary, and discomfort and annoyance to the occupant. Restatement (Second) of Torts § 929(1) (1965). If possible, the court would apportion the damages between that caused by the dam and that caused by natural flooding of the river. See id. § 433A(1) ("Damages for harm are to be apportioned among two or more causes where (a) there are distinct harms, or (b) there is a reasonable basis for determining the contribution of each cause to a single harm."); see also id. cmt. e.[3] In this case, the harm would be greater than from either of the causes and could be separated. An example of such an allocation is presented in Clemones v. Alabama Power Co., 250 F. Supp. 433 (N.D. Ga. 1966), a factually similar case in which the court apportioned between dam-caused flooding and natural flooding of land above a dam, concluding that the effect of the dam was to cause water levels to rise higher and stay longer than would have occurred solely from natural conditions. The court applied § 433A in apportioning the harm between the two causes. Clemones, 250 F. Supp. at 438-39.

¶ 18. Taxpayer has cited a number of Vermont cases to argue that the above analysis does not represent Vermont law. The first is Town of Bennington v. Fillmore & Slade, 98 Vt. 405, 130 A. 137 (1925), where a defendant repaired and modified a dam such that it caused flooding of a town highway. In affirming the liability of the dam owner on a negligence theory,[4] this Court announced the liability of a dam owner where flooding of upstream land is caused by the dam,

[3] We have applied and relied upon § 433A in a number of cases. See Montgomery v. Devoid, 2006 VT 127, ¶ 32, 181 Vt. 154, 915 A.2d 270; Callan v. Hackett, 170 Vt. 609, 610, 749 A.2d 626, 628 (2000) (mem.); Lorrain v. Ryan, 160 Vt. 202, 208, 628 A.2d 543, 547 (1993); Grazulis v. Curtis, 149 Vt. 371, 373, 543 A.2d 1324, 1326 (1988).

[4] Although this is a case involving conduct that would be a trespass because the flooding of upstream lands is intentional, similar liability would be available on a negligence theory, see Restatement of Torts (Second) § 165 (1965), and § 433A(1) of the Restatement would apply whether the dam owner's liability is based on negligence or trespass. Thus, Fillmore & Slade is a relevant precedent here.

caused by the dam and a "freshet"—that is an increase in flow in the river from natural causes like rain storms—or caused exclusively by the freshet:

> It has been held that when a structure is so built and maintained as to set back water upon the land of another during the ordinary and usual conditions of the stream, the person so maintaining it is liable for damages caused by an unforeseen and unprecedented freshet.
>
> When the damages suffered are proximately due, directly and exclusively, to natural causes, without human intervention, which could not have been prevented by any amount of foresight, pains and care reasonably to be expected, there is no liability; because it is an act of God. But if the damages were not due exclusively to such natural causes, in other words, if the negligence of the one sought to be charged mingles with the operation of the natural causes, the injury is not in a legal sense, the act of God. So if the injury which the flood occasioned might have been avoided or prevented by human prudence, foresight, pains and care reasonably to be expected from the defendants, but not exercised by them, they are liable. But where the maintenance of the obstruction has not the effect of causing the stream to overflow in its ordinary condition, or in times of usual high water, no liability attaches for flowage caused by unforeseen and extraordinary freshets.

Id. at 421-22, 130 A. at 144 (citations omitted). This causation law is entirely consistent with § 433A of the Restatement. The quote on which taxpayer relies is based on a situation where the damages to the landowner are caused "exclusively" by natural causes. That is not the situation here, except with respect to flooding that exceeds the 100-year flood level, and the trial court held that taxpayer would have no responsibility for any flooding above that level and any flow easement coverage for land above that level is worthless.

¶ 19. A second decision taxpayer relies upon, Perkins v. Vermont Hydro-Electric Corp., 106 Vt. 367, 380-81, 177 A. 631, 636-37 (1934), explains the same rule as Town of Bennington. A third deals with the liability of an upstream owner of land containing a stream with respect to adverse effects on a downstream landowner, a situation wholly different from that here. See Kasuba v. Graves, 109 Vt. 191, 194 A. 455 (1937). The last case, In re Buttolph, 147 Vt. 641, 527

A.2d 1147 (1987), also involves the liability of an upstream landowner to a downstream landowner and is irrelevant to this case.

¶ 20. In essence, taxpayer asks that we hold that the additional water caused by the dam (1) comes before any additional water that covers the land because of the flow in the river and (2) is located only over the nineteen acres of land that can be attributed to the dam's presence. As the trial court found, this is an oversimplification of what actually occurs. Water, the presence of which is caused by the dam, is mixed with water that comes down the river so that all flooded land areas have a combination of water from both. Because flow easements are provided for a particular place, they are needed wherever there is water that contains a component of water present because of the dam. In essence, that is everywhere, at least as long there is other than a de minimus amount of dam-created water in the mix. While it may be true that land further from the river is less likely to be flooded in a particular year, or may be flooded for only a short duration, there is no evidence of how this affects value, and the value never reaches zero as taxpayer has argued.

¶ 21. Our analysis to this point does not rule out a properly presented theory that the value of a flow easement over a particular acre of land varies depending upon the extent of the dam owner's liability exposure if there were no flow easement and each acre is unique in that respect. In turn, the liability exposure is affected by numerous factors including the use of the underlying land when not flooded; the frequency, duration, and extent of flooding; and the apportionment of causation between the dam and the flow rate in the river. In a simple example, the trial court used this theory to value the flow easements covering land beyond the 100-year flood line at zero because the percentage of flooding caused by the dam at that point was miniscule.

¶ 22. For three reasons, however, this theory was unavailable to taxpayer in this case. First, as the trial court found, and taxpayer acknowledged in its reply brief, taxpayer agreed that

flow easements could be valued at a uniform per acre rate unless the court could find that the value over a particular acre was zero. Second, although taxpayer's counsel raised this theory in cross-examination of the Town's appraiser, taxpayer offered no evidence to support its application. Thus, the court had no way to value a flow easement over a particular acre except where the value was zero. Finally, there was evidence by way of the Town's appraiser that a uniform per acre valuation was appropriate. The Town's appraiser testified that because the flow easement was an interest in land, its value should be established by the rights the deed conveyed rather than how the easement was actually used, and because the flow easements all provided essentially the same rights, they should be valued equally. He also opined that because the valuation could be based on the sales of multiple comparable flow easements, each with a particular per acre value, relying upon the median per acre value accounted for the variation in values from acre to acre. For any of these reasons, the trial court did not commit error in relying on a per acre value for all acreage covered by flow easements except where the value was zero. In reaching this decision, we affirm the trial court's decision to reject taxpayer's position that only the flow easements on acreage flooded solely as a result of the presence of the dam have value.

¶ 23. This brings us to the calculation of the flow easements per acre value, the second major issue. As with the issue of the amount of acreage that contained valuable flow easements, the parties were very far apart on the question of the per acre value of those easements. While both appraisers based their opinion on a sales comparison method of determining value, they differed on the relevant sales to be considered. Taxpayer's appraiser took the position that the price of sales of flow easements could not be used because they did not occur in a free market, but instead were affected by the dam owner's right to obtain the easements by eminent domain. Instead, this appraiser looked at three other kinds of sales for comparison: (1) sales of complete

hydroelectric dams and facilities with and without flow easements; (2) sales of farmland, with and without flow easements, along the upper Connecticut River Valley; and (3) sales of "limited utility" property in the Connecticut River Valley. With respect to the first type of sales, the appraiser found a difference between the price of hydroelectric dams and facilities with flow easements and those without, but judged the difference not to be statistically significant. He found in the second type of sales no difference in price that would show that land with a flow easement over it was less valuable than land without a flow easement over it. He was unable, however, to find a per acre value for flow easements that were not over limited utility land, the vast majority of the land involved in this case.

¶ 24. The appraiser looked at land in the third category because it was similar to the land covered by the nineteen acres the hydrologist found was flooded by the dam during "normal" river flow, which the appraiser found was either land with a high bank or steep grade going down to the river or low-lying flat land. As we noted above, the appraiser found that the per acre value of flow easements over limited utility land was $500 per acre. In his testimony, he concluded that the limited utility land value could be used for the land directly abutting the river up to sixty acres in the Town. For the remainder of the land, he had no opinion on the value of the flow easements.

¶ 25. The Town's appraiser also used the sales comparison approach but found, and relied on, sales of flow easements from a project on the Connecticut River in Massachusetts that effectively increased the level of the dam by three feet and required additional flow easements over land along the river in Massachusetts, New Hampshire, and Vermont. The appraiser found twenty-six deeds transferring flow easements during the period between 1987 and 1994, representing the last transfers on record. He provided limited information on each sale—the land area covered by the sale, the name of the seller, the year of the sale, the deed for the sale, and a

map of the property identifying the part covered by the flow easement. He took the median price per acre from the twenty-six sales—$969 per acre—increased it by 2.5% per year up until April 1, 2012—approximately $1700 per acre—and then decreased it by 77% to account for the difference in property values between Orange and Windham Counties. The appraiser found a $1100 per acre value of flow easements in Newbury. Multiplying that per acre value by the number of acres found by the appraiser, he reached a value of all the flow easements in Newbury of $2,160,000.

¶ 26. The trial court rejected the opinion of taxpayer's appraiser and accepted the methodology of the Town's appraiser, but with adjustments. The trial court found that taxpayer's appraiser provided no useful evidence of per acre value because his opinion relied solely on sales prices for limited utility land, part of which was the nineteen acres identified by the hydrologist as flowed over because of the dam. Although the appraiser could find no difference in the value of land burdened by a flow easement and land not so burdened, he declined to assign a value based on that analysis. He indicated that his opinion of per acre value, $500, was valid for an amount of land up to sixty acres, but not above. Because the court found that 1859 acres were covered by the flow easements, it found taxpayer's expert's opinion irrelevant to that circumstance. It found that taxpayer had not overcome the presumption of regularity that accompanied the Town's appraisal.

¶ 27. The trial court accepted the Town's appraiser's methodology. That included acceptance that the flow easement sales were not too far back in time to be comparable, that there was adequate information about them, and they could be used as comparables even though the purchaser was threatened with condemnation. The court concluded, however, that almost all the sales were of small amounts of property, unlike the acreage amounts for the properties in Newbury, and skewed the median too high. Thus, it relied on only one sale as comparable because it

transferred a flow easement over eighty acres of land. For that sale, it declined to adjust the per acre value for inflation because it found the price quite high. It also found the appraiser's inflation adjustment methodology to be unreliable. Thus, it found the per acre value to be $836, the per acre price of that sale. Applying that value to 1859 acres, it found the overall value of flow easements in Newbury to be $1,554,124.

¶ 28. On appeal, taxpayer challenges the court's conclusion on three grounds: (1) the trial court failed to consider its appraiser's evidence that land covered with flow easements has the same value as land without such easements; (2) the evidence of comparable sales of flow easements on which the court relied was inadmissible and was insufficient to establish fair market value; and (3) taxpayer's evidence overcame the presumption of validity of the Town's appraised value of the flow easements. We decide this issue based on the third ground.

¶ 29. The burden shifting and allocation rules for property tax appeals are set out above. Supra, ¶ 12. They were created by this Court and first announced in Schweizer v. Town of Pomfret, 134 Vt. 436, 438, 365 A.2d 134, 135 (1976), and applied and developed in numerous decisions thereafter. The first requirement, that a town produce its appraisal of fair market value and listed value, has essentially become a pleading requirement. See, e.g., Sondergeld v. Town of Hubbardton, 150 Vt. 565, 568, 556 A.2d 64, 66 (1988) (explaining town must show "initial valuation"). At that point, a presumption of validity arises. The presumption has no evidentiary weight; it is only "locative." Gardner v. Dep't of Soc. Welfare, 135 Vt. 504, 507, 380 A.2d 87, 89 (1977) (explaining locative presumption places "burden of going forward with evidence on the party against whom it operates as a rule of law and has no probative quality"). It is commonly described as a bubble that is burst in a valuation appeal if the taxpayer introduces evidence that an appraisal is higher than fair market value. See Rutland Country Club v. City of Rutland, 140 Vt.

142, 145-46, 436 A.2d 730, 732 (1981). This is essentially a screening requirement that is usually easily met because it is based on admissible evidence and does not consider the weight of that evidence. For example, in a personal appeal, it could be met solely by the testimony of a landowner that the value is an amount less than that found by a town because the landowner is "a competent witness to testify as to the value" of the property. 12 V.S.A. § 1604. The opinion of value is admissible even though the factfinder may give it no probative value.

¶ 30. In Rutland Country Club, we went back to our leading case on locative presumptions, Tyrrell v. Prudential Insurance Co., 109 Vt. 6, 192 A. 184 (1937), to explain the presumption in context: " 'if and when enough rebutting evidence is admitted to make a question for the jury on the fact involved, the presumption disappears and goes for naught.' " Rutland Country Club, 140 Vt. at 145-46, 436 A.2d at 732 (quoting Tyrrell, 109 Vt. at 24, 192 A. at 192). In a case where the factfinder is a judge or hearing officer, the evidence must create a factual dispute related to value that must be resolved by the factfinder. Another analogy to consider is that responding to a presumption of validity is like responding to a motion for summary judgment by showing that there is a material issue of fact that prevents judgment for the moving party as a matter of law. This analogy is helpful because it explains how the trial judge ruled in this case. The court ruled that taxpayer, who had the overall burden of proof, could not prevail as a matter of law because it offered no evidence from which the court could lawfully determine the value of the flow easements.

¶ 31. Once taxpayer did not prevail on the first issue, the amount of land over which the flow easements would be valued, it could prevail on the second only if it had evidence of the per acre value to be applied to the acreage determined by the trial court, and affirmed above. It offered no such evidence. In cross-examination by the lawyer for the State, taxpayer's appraiser testified

that he had no opinion of the value of flow easements over any land other than the limited utility land. Based on that testimony, the trial court observed "[taxpayer's appraiser] testified that he had no opinion as to the value of flowage easements exceeding 60 acres," and concluded that "[a]t most, [the] appraisal showed the easements should be valued at some unknown amount in excess of $500 per acre." Thus, in the trial judge's view, taxpayer's evidence could not rebut the presumption of validity of the Town's appraisal.

¶ 32. Taxpayer has two responses to the trial court's decision. First, it argues that the appraiser's evidence that he could find no difference in value between farmland covered by a flow easement and farmland that was not so covered rebutted the presumption of validity of the Town's appraisal. The weakness in taxpayer's argument is that its position that flow easements over land, other than the small amount of land identified as flooded because of the presence of the dam, have no value was based on its view that it has no responsibility for flood damage except in that small area and not on a factual presentation that the flow easements over the farmland have no value. The court rejected that position, and we have affirmed that decision. Whatever the value of the appraiser's research into sales of farmland in the area with and without flow easements, the results were not sufficient to enable the appraiser to offer an opinion of the value of flow easements over farmland. Thus, the appraiser did not state the opinion that all flow easements over agricultural land are worthless even if the dam is responsible at least in part in flooding them. In short, the trial court ruled against taxpayer as a matter of law, not as a matter of fact. Taxpayer gave the court no evidence on which it could render a judgment for it based on its theory of the case. We must hold that taxpayer did not rebut the presumption of validity of the Town's appraisal. See City of Barre v. Town of Orange, 152 Vt. 442, 445, 566 A. 2d 951, 952-53 (1989) (holding taxpayer, City of Barre, did not rebut presumption of validity where, relying on inapplicable

statute, it based its case on listed value, and not fair market value, of alleged comparable properties).

¶ 33. This ruling necessarily answers taxpayer's second ground—that the court could not produce a valuation based on a single comparable sale of flow easements because the sale was not at arm's length, was too old, and too little relevant information was known about it to adjust its price to reflect conditions involved in the value of the flow easements at issue in this case. Once the court held that taxpayer had not rebutted the presumption of validity of the Town appraisal, it had to issue judgment for the Town. Taxpayer cannot prevail based on errors in the Town's valuation substance and procedure. See In re Bilmar Team Cleaners, 2015 VT 10, ¶ 11 (explaining taxpayer burden to overcome presumption of validity " 'cannot be met by simply impugning the [Town's] methods or questioning its understanding of assessment theory or technique' " (quoting Sondergeld, 150 Vt. at 568, 556 A.2d at 66)).

¶ 34. The alternative is stalemate—a case in which the court could not rule for either side. In a number of cases where valuation has been very difficult, particularly involving utility property, we have stressed the need to come to a conclusion to allow the Town to levy property taxes. See Morrisville Water & Light Dep't v. Town of Hyde Park, 131 Vt. 590, 595, 313 A.2d 22, 24 (1973) ("[W]e note that the law of this State requires this Court to find some allowable mode of legalizing the collection of taxes justly due."); see also In re Montpelier & Barre R.R. Co., 135 Vt. 102, 104, 369 A.2d 1379, 1381 (1977); New England Power Co. v. Town of Barnet, 134 Vt. 498, 505, 367 A.2d 1363, 1368 (1976). Taxpayer has the ultimate burden of proof in this case, and it is appropriate to deny it the opportunity to prevail when it has not made out a prima facie case.

¶ 35. Because taxpayer failed to rebut the presumption of validity of the Town appraisal, the Town was entitled to judgment for the full amount of that appraisal, without the downward adjustments made by the trial court. The Town, however, did not cross-appeal from those adjustments so they must stand.

Affirmed.

FOR THE COURT:

_____

Associate Justice

Amended Final Application for New License for Major Water Power Project — Existing Dam

Wilder Project (FERC No. 1892)

EXHIBIT G: PROJECT AREA MAPS

Courtesy paper copies of Great River Hydro's Exhibit G maps are not included with this filing. There have been no changes to the maps since the Final License Application was filed on May 1, 2017.

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EXHIBIT G: MAPS OF LOCATION, BOUNDARY, FEDERAL LANDS, AND NONFEDERAL LAND OWNERSHIP

Section 5.18(a)(5)(iii) of Title 18 of the Code of Federal Regulations (CFR) refers to Section 4.51 (License for Major Project—Existing Dam) for a description of information that an applicant must include in Exhibit G of its license application. Exhibit G contains a set of Project maps that conform to requirements stated in Section 4.39.

G1 Project Area Maps

Exhibit G drawings are maps of the Project area showing the existing FERC Project boundary for the current license. No tentative boundary is indicated because there are no proposed developments and there are no other adjustments to the boundary.

G1.1 Federal Lands

No federal lands are located within the Project Boundary.

G1.2 Non-Federal Lands

The Exhibit G drawings identify lands that Great River Hydro, LLC (Great River Hydro), owns in fee, and lands over which Great River Hydro has acquired, or plans to acquire rights to occupancy and use other than fee title, including rights acquired or to be acquired by easement or lease. These drawings are electronically filed separately as large format documents and Project boundary files as ArcGIS files (in zipfile format).

G2 Exhibit G Drawings

The Exhibit G drawings and Project boundary description tables are identified as shown in Table G2-1.

Table G2-1. Exhibit G drawings.

Exhibit No.	Sheet No.	Title
G-1	Sheet 1	Exhibit G: Wilder Project – No. 1892 (Plant Area)
G-2	Sheet 2	Exhibit G: Wilder Project – No. 1892 (Project Boundary Sheet)
G-3	Sheet 3	Exhibit G: Wilder Project – No. 1892 (Project Boundary Sheet)
G-4	Sheet 4	Exhibit G: Wilder Project – No. 1892 (Project Boundary Sheet)
G-5	Sheet 5	Exhibit G: Wilder Project – No. 1892 (Project Boundary Sheet)
G-6	Sheet 6	Exhibit G: Wilder Project – No. 1892 (Project Boundary Sheet)
G-7	Sheet 7	Exhibit G: Wilder Project – No. 1892 (Project Boundary Sheet)

Exhibit No.	Sheet No.	Title
G-8	Sheet 8	Exhibit G: Wilder Project – No. 1892 (Project Boundary Sheet)
G-9	Sheet 9	Exhibit G: Wilder Project – No. 1892 (Project Boundary Sheet)
G-10	Sheet 10	Exhibit G: Wilder Project – No. 1892 (Project Boundary Sheet)
G-11	Sheet 11	Exhibit G: Wilder Project – No. 1892 (Project Boundary Sheet)
G-12	Sheet 12	Exhibit G: Wilder Project – No. 1892 (Project Boundary Sheet)
G-13	Sheet 13	Exhibit G: Wilder Project – No. 1892 (Project Boundary Sheet)
G-14	Sheet 14	Exhibit G: Wilder Project – No. 1892 (Project Boundary Sheet)
G-15	Sheet 15	Exhibit G: Wilder Project – No. 1892 (Project Boundary Sheet)
G-16	Sheet 16	Exhibit G: Wilder Project – No. 1892 (Project Boundary Sheet)
G-17	Sheet 17	Exhibit G: Wilder Project – No. 1892 (Project Boundary Sheet)
G-18	Sheet 18	Exhibit G: Wilder Project – No. 1892 (Project Boundary Sheet)
G-19	Sheet 19	Exhibit G: Wilder Project – No. 1892 (Project Boundary Sheet)
G-20	Sheet 20	Exhibit G: Wilder Project – No. 1892 (Project Boundary Sheet)
G-21	Sheet 21	Exhibit G: Wilder Project – No. 1892 (Project Boundary Sheet)
G-22	Sheet 22	Exhibit G: Wilder Project – No. 1892 (Project Boundary Sheet)
G-23	Sheet 23	Exhibit G: Wilder Project – No. 1892 (Project Boundary Sheet)
G-24	Sheet 24	Exhibit G: Wilder Project – No. 1892 (Project Boundary Sheet)
G-25	Sheet 25	Exhibit G: Wilder Project – No. 1892 (Project Boundary Sheet)
G-26	Pages 1-3	Wilder Project, P-1892 - Project Boundary Description table

Amended Final Application for New License for Major Water Power Project — Existing Dam

Wilder Project (FERC No. 1892)

EXHIBIT H (Public): PLANS AND ABILITY OF APPLICANT TO OPERATE PROJECT EFFICIENTLY FOR RELICENSE

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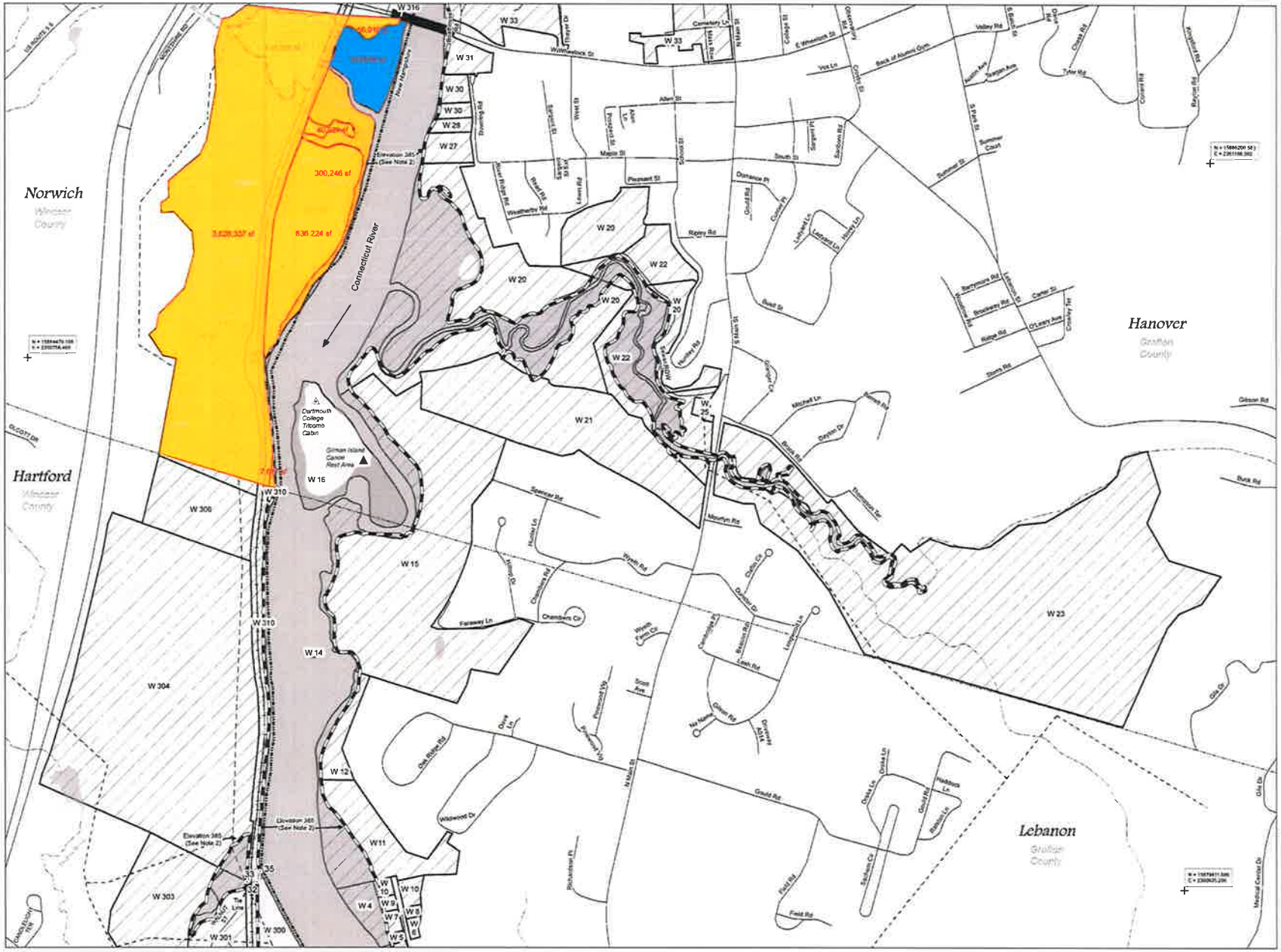

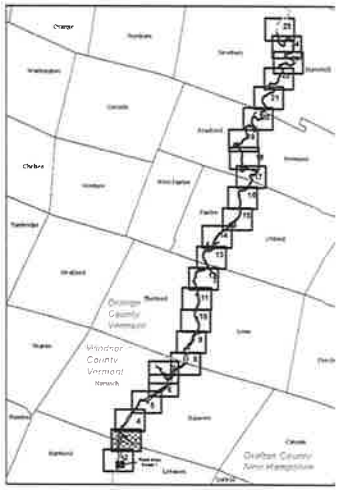

Index Not to Scale

Map Projection:
UTM Zone 18N, NAD 83

Vertical Datum:
NGVD 1929

Notes

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EXHIBIT G SHEE

Great River Hydro, LLC

Wilder Project-No.1892

0 200 400 800 1,200 1,600

1 Inch = 400 feet

Legend

Ownership
- Flowage Rights
- Fee Ownership
- W 120 Parcel ID

- Project Boundary
- 100 Turning Point (See Project Boundary table for Turning Point metes and bounds)
- Tie Line

- Dam/Bridge
- Project Recreation Area
- Non-Project Recreation Area
- Reference Point

- Water Bodies
- Stream or River
- Roads
- Railroad

- Transmission Line
- State Line
- Town Boundaries
- Town Name

- County Name
- River Rd/RIVER RD Street Name
- Brook/Stream Name

SURVEYOR'S STATEMENT

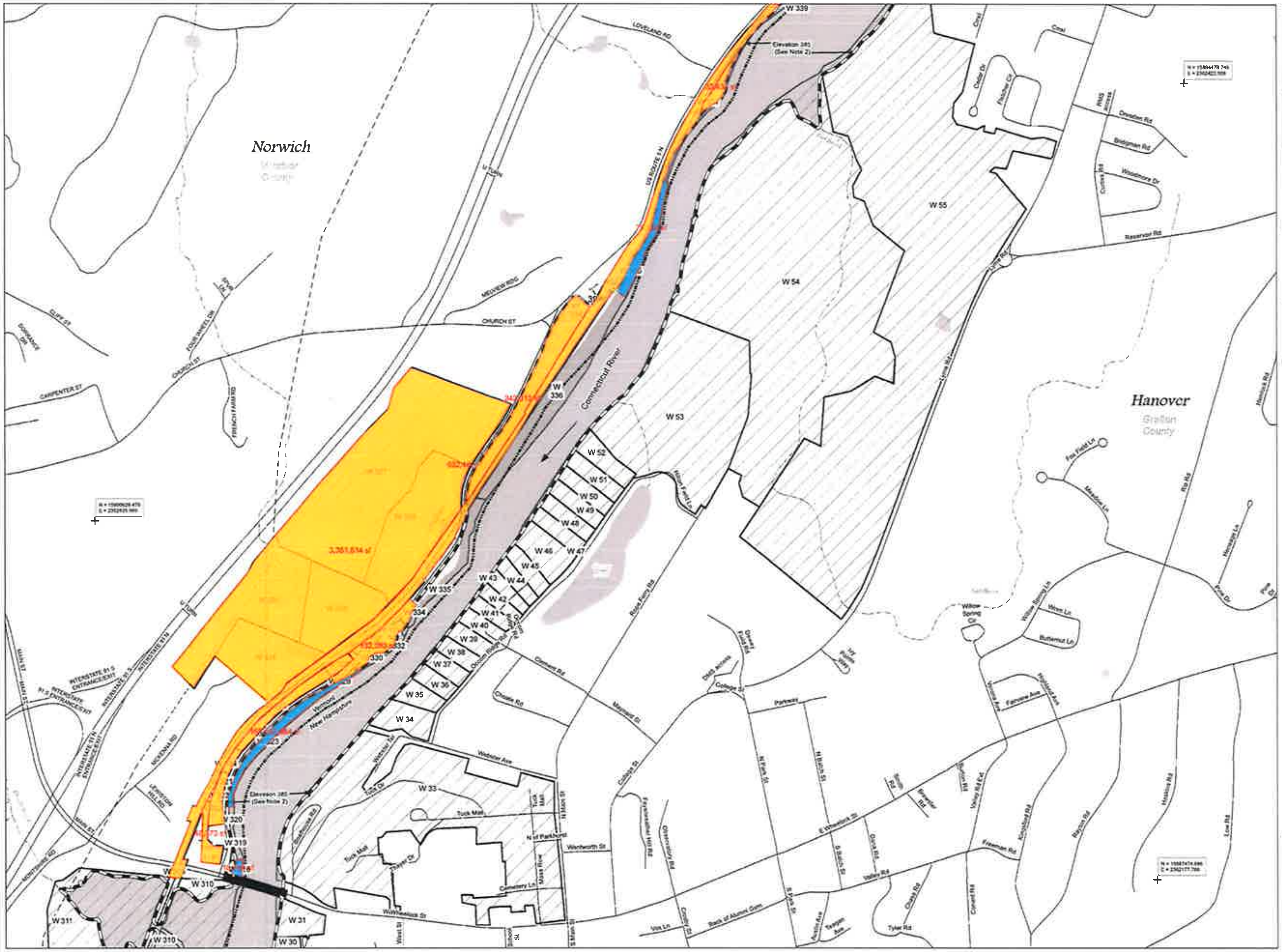
I hereby state that the Project Boundary delineation for the Wilder Project (FERC #P-1892) as shown on this Exhibit "G" drawing was developed within reasonable accuracies as required in 18 CFR 4.41, geographically positioned in reference to USGS quadrangle mapping within and near, and adjusted and/or related to best fit the USGS quadrangle map features and other supplemental data listed as item 5 under "Notes". This Exhibit "G" is not a boundary survey; no field survey or field verification was conducted. Approximate bearings and distances shown were generated using mapping software and do not represent dimensions from deeds or plans. The Project Boundary and property interests depicted on this drawing should not be used for purposes of developing property boundary descriptions.

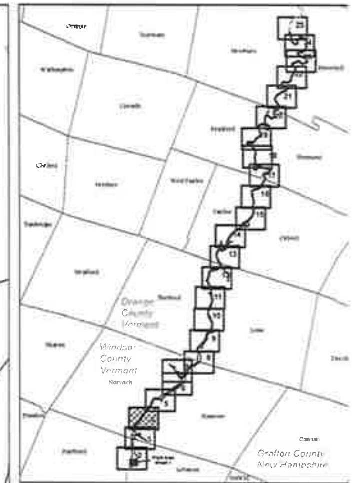
BY _____ 4/26/2017
James W. Murray, PLS ME 2296 Date

DRY LAND

2025/09/17 Norwich, VT GRH BCA S Associates Attachment 4 Wilder Exh. Sheets 3-8 for report 05-15-2025

FERC Drawing # P-1892-XXX





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Great River Hydro, LLC
Wilder Project-No.1892

0 200 400 800 1,200 1,600

1 inch = 400 feet

DRY LAND

Legend

Ownership
Flowage Rights
Fee Ownership
W 120 Parcel ID

Project Boundary
100 Turning Point
(See Project Boundary table for Turning Point metes and Bounds)
Tie Line

Dam/Bridge
Project Recreation Area
Non-Project Recreation Area
Reference Point

Water Bodies
Stream or River
Roads
Railroad

Transmission Line
State Line
Town Boundaries
Town Name

County Name
River Rd/RIVER RD Street Name
Brook/Stream Name

SEWALL

BY James W. Murray, PLS ME 2296 4/26/2017 Date

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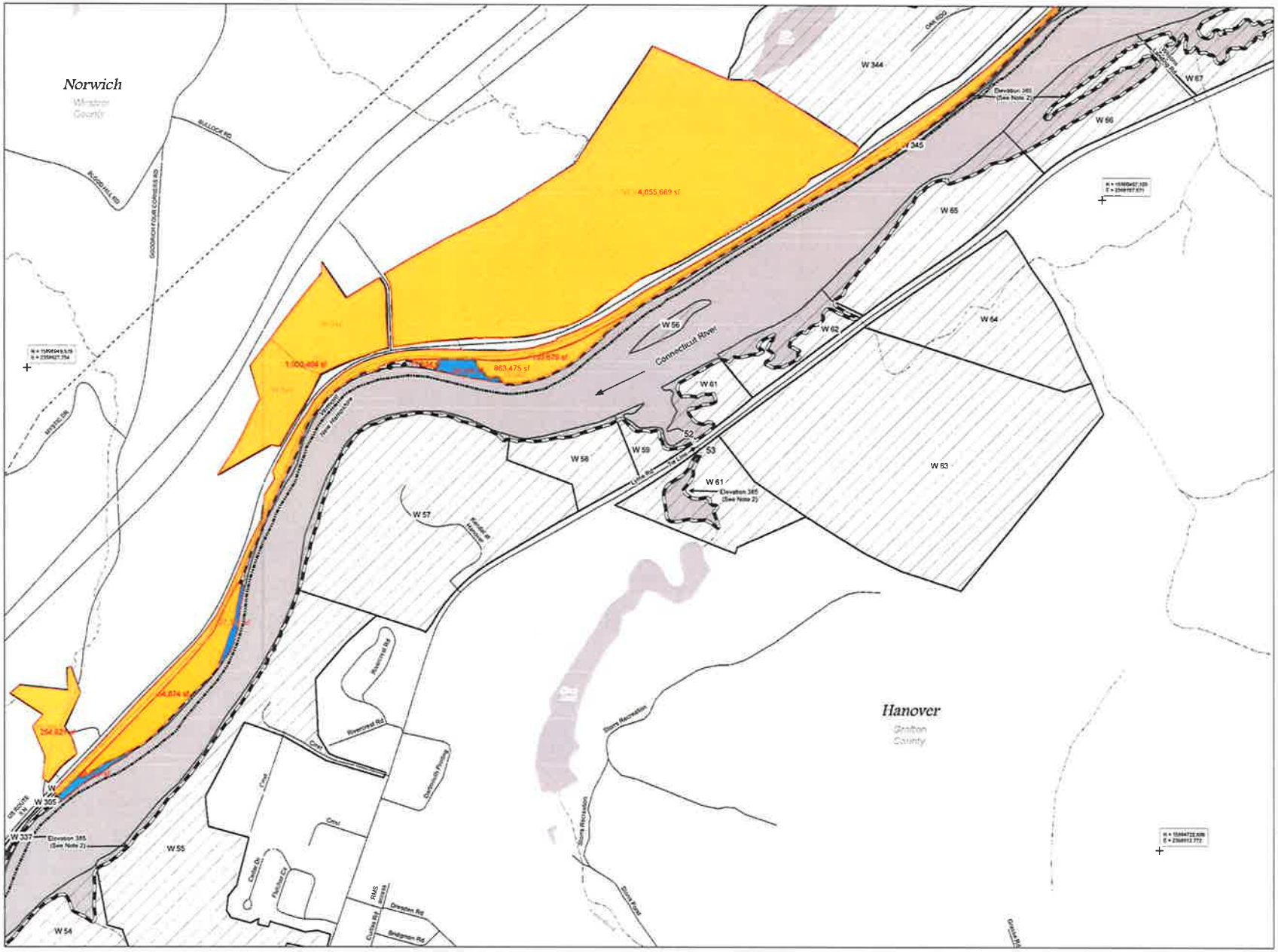

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SEWALL

STATE OF MAINE JAMES W. MURRAY 2296 REGISTERED LAND SURVEYOR

BY _____ 4/26/2017
James W. Murray, PLS ME 2296 Date

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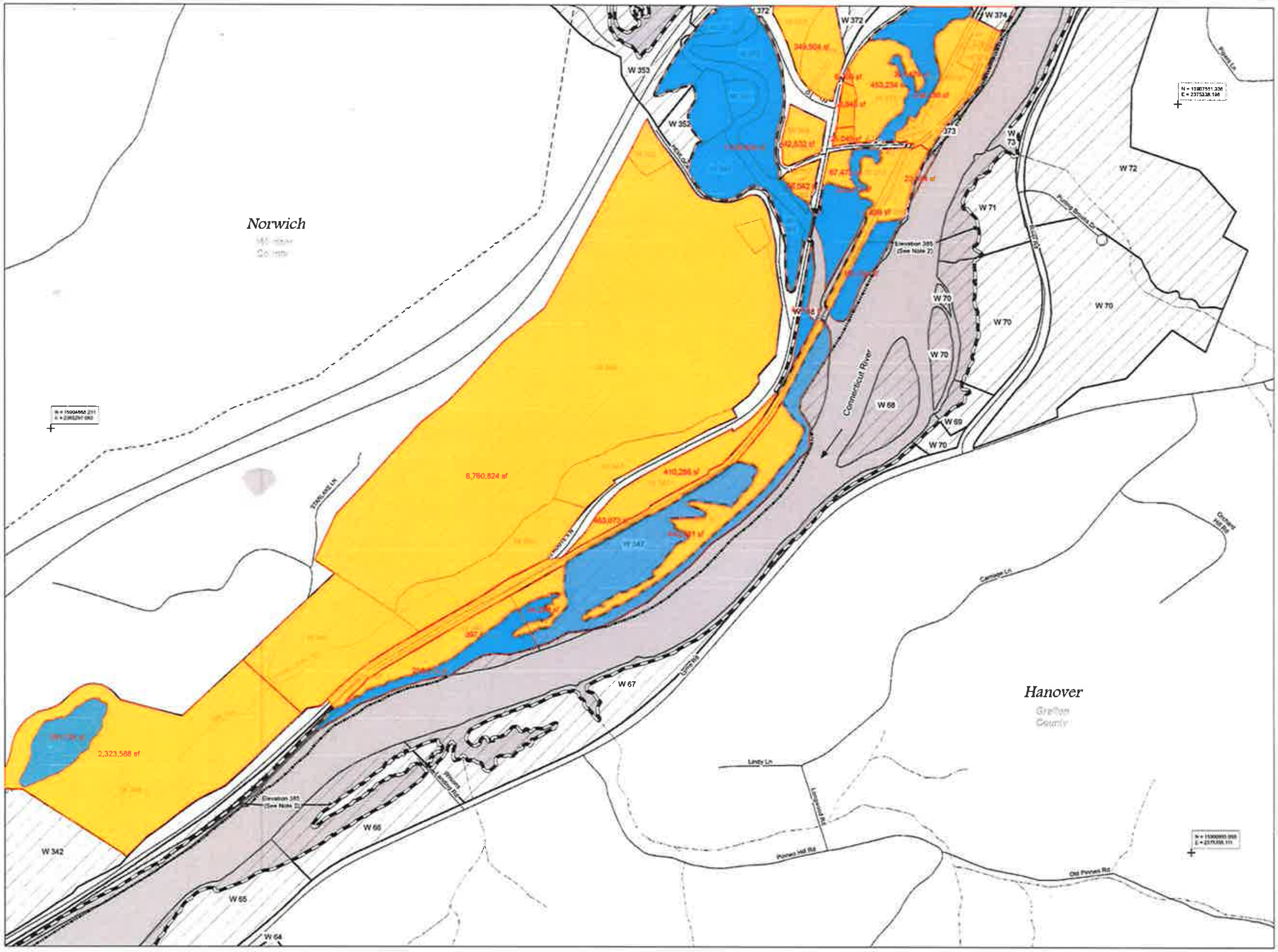

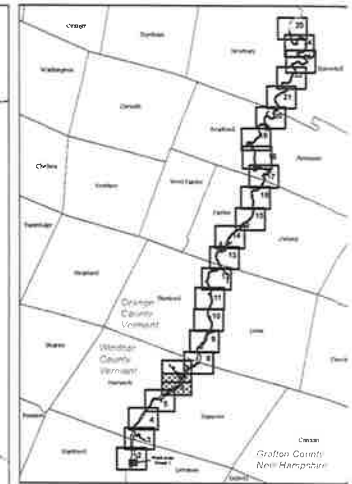

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Wilder Project-No.1892

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DRY LAND

WET LAND

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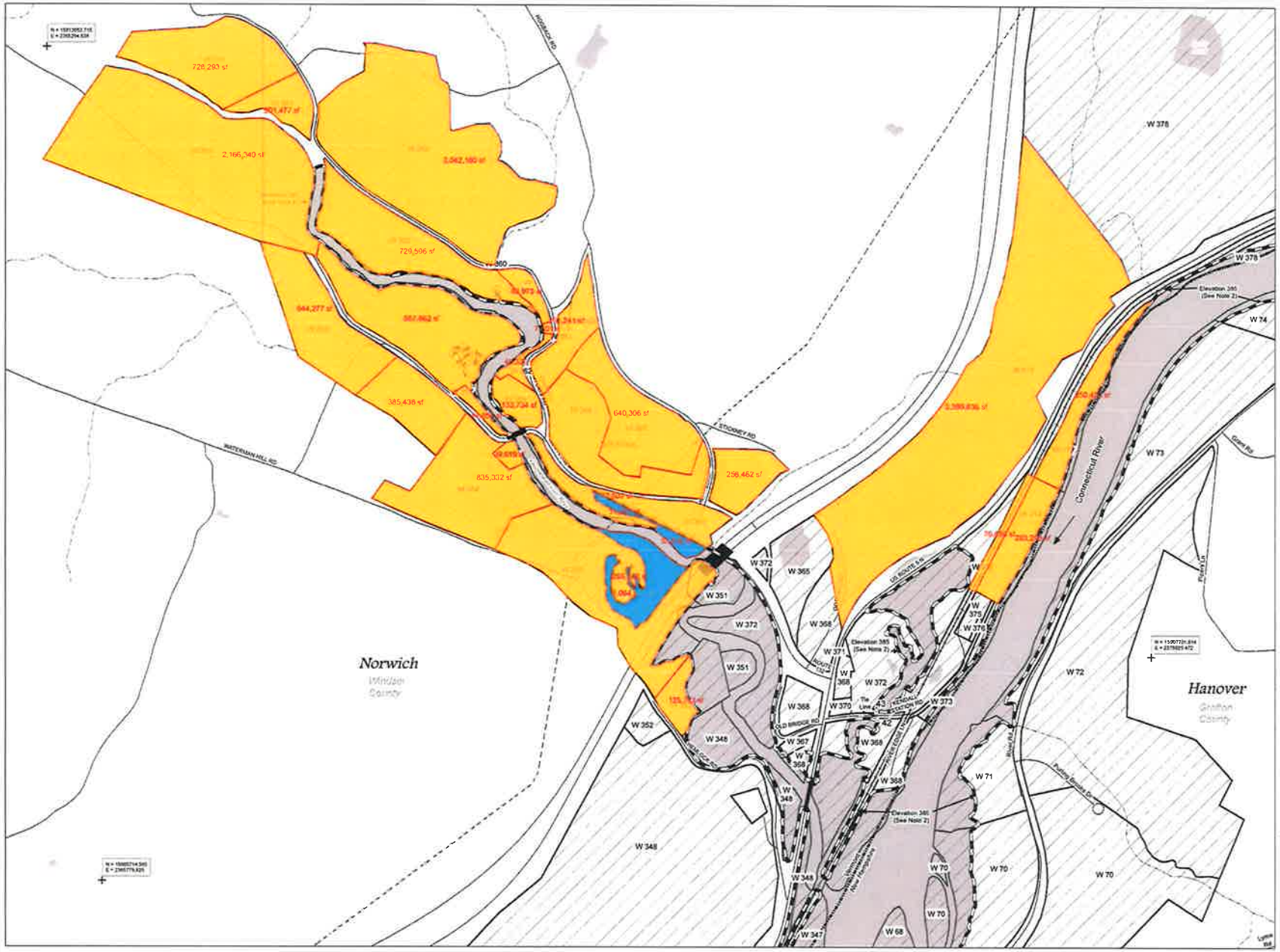

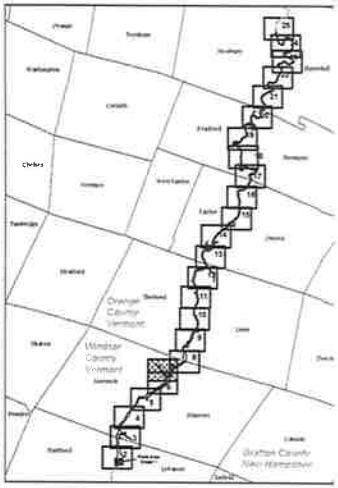

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- Dam/Bridge
- Project Recreation Area
- Non-Project Recreation Area
- Reference Point

- Water Bodies
- Stream or River
- Roads
- Railroad

- Transmission Line
- State Line
- Town Boundaries
- Town Name

- County Name
- River Rd/RIVER RD Street Name
- Brook/Stream Name

SEWALL

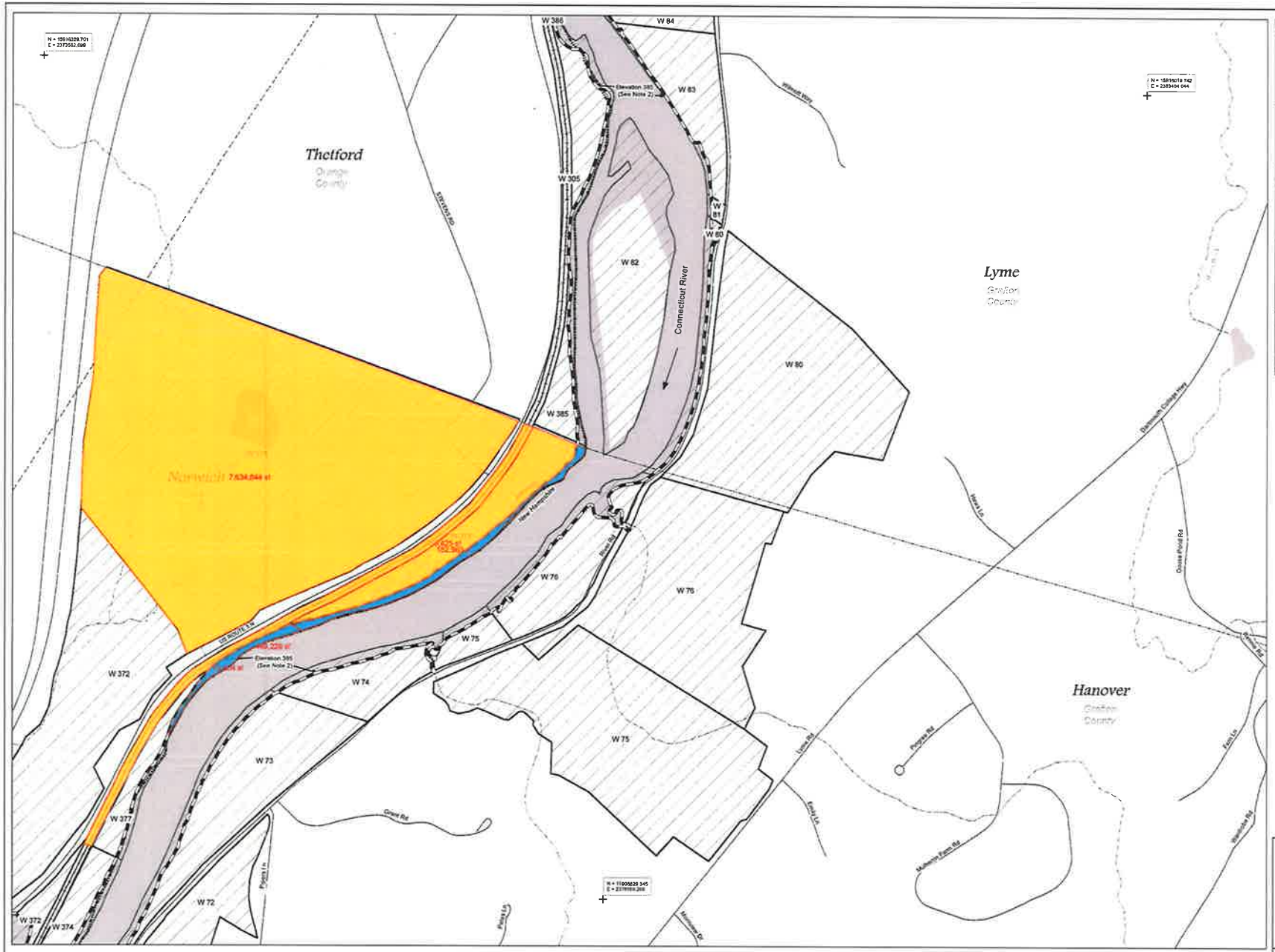
STATE OF MAINE
JAMES W. MURRAY
2296
PROFESSIONAL
LAND SURVEYOR

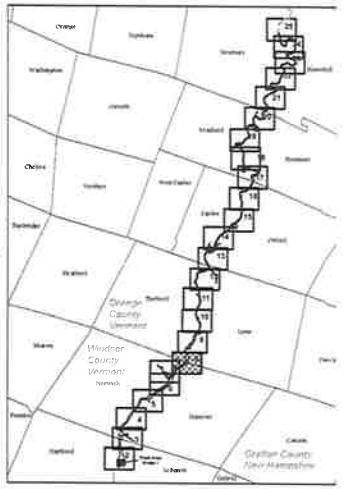
BY _____ 4/26/2017
James W. Murray, PLS ME 2296 Date

SURVEYOR'S STATEMENT

I hereby state that the Project Boundary delineation for the Wilder Project (FERC #P-1892) as shown on this Exhibit "G" drawing was developed within reasonable accuracies as required in 18 CFR 4.41, geographically positioned in reference to USGS quadrangle mapping sheet grid lines, and adjusted and/or related to best fit the USGS quadrangle map features and other supplemental data listed as Item 5 under "Notes". This Exhibit "G" is not a boundary survey; no field survey or field verification was conducted. Approximate bearings and distances shown were generated using mapping software and do not represent dimensions from deeds or plats. The Project boundary and property interests depicted on this drawing should not be used for purposes of developing property boundary descriptions.

FERC Drawing # P-1892-XXX





Index Not to Scale

Map Projection:
UTM Zone 18N, NAD 83

Vertical Datum:
NGVD 1929

Notes:

1) The Licensee possesses all necessary land rights for operation and mainte Project. The property lines and the limits of the flowage rights are shown for purposes only, and are based upon historic project maps and Licensee's reco tax assessor's information, and deeds and plans of record. Reference should the specific title information for precise descriptions of each tract.

2) The Project Boundary generally follows the outside lines of Licensee's fee- and otherwise to the elevation of the impoundment's inundation limit at norm where the Licensee holds flowage rights. However, the exact location of a lin the outside limits of such flowage rights cannot be precisely determined sinc under varying stream flow, ice, and other conditions. The 385 foot contour lin depicting that inundation limit elevation for the purposes of this Exhibit "G". E Dam, the Project Boundary follows the shoreline around the Licensee's fee-o (including islands), depicted as the 328-foot contour line for the purposes of t

3) Existing Project recreation facilities, including private access roads, are wh within the Project Boundary.

4) The state boundary is depicted here for reference only. The actual state bo "along the western side of the [Connecticut] River at low water mark." See U Supreme Court 290 U.S. 579 for details.

5) Available USGS quadrangle information was supplemented with most curr available GIS data from USGS, New Hampshire GRANIT, and the Vermont C Geographic Information, including hydrography, transportation and transmissi features, and aerial imagery. Furthermore, the Licensee acquired and develo data sets, including high resolution LiDAR imagery (taken between April 29, 2 May 7, 2013) and LiDAR-derived topographic data that was interpolated for d the contour-based portions of the Project Boundary.

EXHIBIT G SHEE

Great River Hydro, LLC

Wilder Project-No.1892

0 200 400 800 1,200 1,600

1 inch = 400 feet

DRY LAND

WET LAND

Legend

Ownership
- Flowage Rights
- Fee Ownership
- W 120 Parcel ID

Project Boundary
100 Turning Point (See Project Boundary table for Turning Point metes and Bounds)
Tie Line

Dam/Bridge
Project Recreation Area
Non-Project Recreation Area
Reference Point

Water Bodies
Stream or River
Roads
Railroad

Transmission Line
State Line
Town Boundaries
Town Name

County Name
River Rd/RIVER RD Street Name
Brook/Stream Name

SEWALL
AWS PRECISION STAKES

STATE OF MAINE
JAMES W. MURRAY
2296
PROFESSIONAL
LAND SURVEYOR

BY _____ 4/26/2017
James W. Murray, PLS ME 2296 Date

SURVEYOR'S STATEMENT:

I hereby state that the Project Boundary delineation for the Wilder Project (FERC #P-1892) as shown on this Exhibit "G" drawing was developed within reasonable accuracies as required in 18 CFR 4.41, geographically positioned in reference to USGS quadrangle mapping within ±40 feet, and adjusted and/or rotated to best fit the USGS quadrangle map features and other supplemental data listed as item 5 under "Notes". This Exhibit "G" is not a boundary survey; no field survey or field verification was conducted. Approximate bearings and distances shown were generated using mapping software and do not represent dimensions from deeds or plans. The Project Boundary and property interests depicted on this drawing should not be used for purposes of developing property boundary descriptions.

FERC Drawing # P-1892-XXX