Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

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IN THE MATTER OF	***:***	***APPLICATION NO. DIV – 201404187***
THE CONNECTICUT WATER COMPANY/ THE UNIVERSITY OF CONNECTICUT	***:***	***MAY 28, 2015***

PROPOSED FINAL DECISION

I
SUMMARY

The Applicants, the Connecticut Water Company (CWC) and the University of Connecticut (UConn), have applied to the Department of Energy and Environmental Protection (DEEP) for a permit to divert water from a CWC public water system to provide additional water supply to UConn and the Town of Mansfield. DEEP found the application to be complete and, following its technical review, published a Notice of Tentative Determination on December 16, 2014, to approve the application and issue the permit. A petition for hearing was filed on January 13, 2015. The parties are the Applicants and Staff of the DEEP Inland Water Resources Division.

A hearing to receive public comment was held in Mansfield on March 25, 2015, followed by an evidentiary hearing at DEEP in Hartford on March 26, 2015. Public comments were accepted until April 15, 2015, when the record closed. The Applicants submitted proposed findings of fact and conclusions of law for my consideration on May 14, 2015. (Attachments A and B.) Staff filed a memoranda on May 15, 2015, concurring with these proposed findings and confirming that the conclusions in DEEP's tentative determination to approve remain valid.

I have reviewed the record and all relevant law in order to evaluate the proposed findings of fact and conclusions of law and find that they are fully sustained by the record and provide the necessary facts and law to support my decision and therefore adopt them. The substantial evidence in the record shows that the application and the draft permit (Attachment C), which was revised to protect certain species, comply with all applicable statutory and regulatory criteria. I therefore recommend the revised draft permit be issued as a final permit.

II
DECISION

A
FINDINGS OF FACT

Finding of Fact (FOF) II. No. 13, the footnotes to FOF IV. B. 6. *a)* No. 44, and the italicized sentences in FOF V. Nos. 125 and 127 supplement the proposed findings of fact.

II. Procedural History

13. Two requests to intervene, each titled "Motion for Intervenor Party Status," were filed on February 26, 2015, and March 11, 2015. As there was no formal indication that the movants were represented by counsel, the motions were considered pro se filings. Despite a liberal reading afforded to pro se movants, the apparent allegations made in each motion failed to meet the necessary statutory or regulatory thresholds to grant intervention. The motions were denied without prejudice to resubmittal; neither motion was re-filed.[1]

IV. STATUTORY AND REGULATORY BACKGROUND

B. Water Diversion

6. Environmental Impact Report: Effects of the Proposed Diversion

a) Lake Levels

[1] These motions and my rulings on them are in the Docket File of this matter. This File is maintained in the Office of Adjudications and may be reviewed upon request.

44. Shenipsit Lake Reservoir has a storage volume of more than 5 billion gallons[2] and a maximum depth of 68 feet. (Ex. APP-1/Attachment D4, § 4.0; test. D. Radka, D. Murphy Tr. 46-48, 54-57).[3]

V. Public Comments on Proposed Permit

125. Several of the individuals opposing the proposed diversion questioned the fairness of the process for issuing the diversion permit or requested an independent evaluation of the project.

Finding: As addressed by Section II and IV, the process has followed all relevant laws, rules of practice and regulations for processing an individual diversion permit application. *The process included this adjudication of the application and proposed diversion permit, which required the Applicants to demonstrate to an impartial hearing officer that substantial evidence supports the granting of the application and the issuance of the permit.*

127. During the comment period, a resident of Tolland submitted a petition signed by more than 250 people asking that an independent entity create an environmental impact study of the proposed diversion of water from Shenipsit Lake Reservoir prior to approval of the diversion application.

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[2] One billion is the equivalent of one thousand million; a storage volume of five billion is the equivalent of five thousand million gallons. The proposed diversion of a maximum of 1.85 million gallons per day would be approximately .037% of this storage volume. See also FOF III. B. No. 18 (Attachment A).

[3] A transcript was prepared of the March 26, 2015 evidentiary hearing. All references to testimony are from that day with page and line references noted.

Finding: DEEP's review is independent of the Applicants' and these issues have been studied over many years. *In any case, the request made in the petition exceeds the authority of the hearing officer and was received during the public comment phase of the hearing process. Given the time it was submitted and the public concerns and questions listed in its cover letter, the petition was considered public comment and placed in the administrative record of this proceeding.*

B

CONCLUSIONS OF LAW

The diversion of water proposed in the application, as conditioned by the revised draft permit, is regulated by the Connecticut Water Diversion Policy Act, General Statutes §§22a-365 through 22a-378, and its implementing regulations at Regs., Conn. State Agencies §§22a-372-1, 22a-377(b)-1, 22a-377(c)-1 and 22a-377(c)-2. In evaluating the proposed conclusions of law, I have reviewed the applicable statutory and regulatory criteria set out in these statutes and regulations and the provisions of §26-310. I concur with the conclusions proposed by the Applicants and approved by DEEP Staff, which I summarize as follows.

The application included information required pursuant to §22a-369 and satisfied the procedural requirements of §§22a-371, 22a-372, and §22a-377(c)-2(a). The revised draft permit, which includes provisions to protect certain species, complies with §26-310. The substantial evidence in the record also supports the issuance of this permit based on the consideration of facts and circumstances listed in subdivisions (1) through (10) in subsection (b) of §22a-373 and the relevant factors described in §§22a-377(c)-2, particularly subsections (d) and (f)(1) through (5).

C

CONCLUSION AND RECOMMENDATION

The Applicants demonstrated by a preponderance of the substantial evidence that the application and the revised draft permit, which contains provisions that are sufficient to protect the environment, comply with all relevant statutes and regulations. I recommend approval of this application and issuance of the attached revised draft permit as a final permit.

Janice B. Deshais, Hearing Officer

ATTACHMENT A
STATE OF CONNECTICUT
DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION
OFFICE OF ADJUDICATIONS

IN THE MATTER OF	:	APPLICATION NO. DIV-201404187
THE CONNECTICUT WATER COMPANY	:	
and	:	
UNIVERSITY OF CONNECTICUT, Applicants	:	May 14, 2015

APPLICANTS' PROPOSED FINDING OF FACTS

INTRODUCTION

Pursuant to the Hearing Officer's Post-Hearing Directive, the University of Connecticut ("UConn" or the "University"), and the Connecticut Water Company ("CWC") (collectively, the "Applicants") respectfully submit this Proposed Finding of Facts regarding the above-captioned application matter. In submitting this Proposed Finding of Facts, the Applicants reserve their rights to either file exceptions to the Hearing Officer's proposed Final Decision or to waive their right to do so upon review of the Hearing Officer's proposed final decision, pursuant to Conn. Gen. Stat. § 4-179(d).

PROPOSED FINDINGS OF FACT

Taking into consideration and giving due regard to all of the evidence in the record, the Applicants stipulate to the following findings of fact:

I. Project Background

1. In June 2011, the Connecticut Legislature directed that UConn work in consultation with the Town of Mansfield to evaluate necessary utilities infrastructure in light of Tech Park legislation (P.A. 11-57, Sec. 92). The collaborative efforts of UConn and the Town of Mansfield

included initiation of the Environmental Impact Evaluation ("EIE") under the Connecticut Environmental Policy Act ("CEPA") to allow for a detailed evaluation of potential additional water supply alternatives to supplement the University's existing sources. The Application for the Diversion of Water, the subject of this proceeding, is the outcome of that process.

II. Procedural History

2. On April 29, 2014, the Applicants submitted to the DEEP an application to divert up to 1.18 million gallons per day (mgd) (average) / 1.85 mgd (peak) of water under the Water Diversion Policy Act, Conn. Gen. Stat. § 22a-365 et seq. (the "Application") (Exhibit App-1). The Application has been submitted on the prescribed forms and is complete (Exhibit DEEP-3). The Application consists of a completed application form titled "Permit Application Transmittal Form" ("Application Form") and all applicable Attachments. (Ex. App-1.)

3. A Notice of the Application was published on April 9, 2014, in the Hartford Courant; on April 25, 2014, in the Journal Inquirer; and on April 8, 2014, in The Chronicle (Exhibit App-1; Attachment AA).

4. After submission of the Application, on June 24, 2014, the DEEP requested additional information, including clarifications regarding the Application (Exhibit DEEP-13). The Applicants fully responded to the DEEP's request on July 24, 2014 (Exhibit App-2, DEEP-10).

5. On December 16, 2014, following a technical review of the Application (Exhibit App-1), the DEEP published in the Journal Inquirer, Hartford Courant and The Chronicle, a Notice of Tentative Determination to approve an Application for Diversion of Water Permit and Intent to Waive Public Hearing (Exhibit DEEP-3). The DEEP also issued a Draft Permit (Exhibit DEEP-4). The Draft Permit was amended and submitted during the hearing ("Revised Draft Permit"). (Exhibit DEEP-21).

6. Subsequently, on January 13, 2015, the DEEP received a petition signed by 25 or more persons requesting a public hearing on the Application. David Freudmann (the "Petitioner") was identified as the representative of the petitioners.

7. A status conference was held on February 3, 2015, during which the prehearing procedures were established and dates for the hearing and prehearing conferences were assigned. W. Richard Smith, Jr., counsel for UConn; Mark R. Sussman and Patricia L. Boye-Williams, counsel for the Connecticut Water Company; Douglas Hoskins of the DEEP Staff; Arthur Smith, counsel for the Petitioner; Jason Coite and Thomas Callahan of UConn; and David Radka and Maureen Westbrook of the Connecticut Water Company were present. At the conference, the site visit was scheduled for March 10, 2015 and the public hearing was scheduled for March 25, 2015, to be continued for the collection of evidence on March 26, 2015 and March 27, 2015 (if needed). A prehearing conference was scheduled for March 5, 2015, at which the Parties were required to file a list of legal issues to be resolved at the hearing, a list of proposed witnesses with a summary of each witness's proposed testimony and for each expert witness, a statement of credentials supporting that witness's qualifications as an expert, as well as a list of all exhibits and electronic copies of all exhibits (Status Conference Summary dated February 4, 2015).

8. On February 13, 2015, Applicants (with DEEP's concurrence) filed a request to submit pre-filed testimony on or before March 5, 2015. This request was granted on February 17, 2015. (See e-mail from J. Deshais dated February 17, 2015).

9. On February 20, 2015, a Notice of Public Hearing was published in the Journal Inquirer, Hartford Courant and The Chronicle, notifying the public of (1) a site visit on March 10, 2015, and (2) a public hearing on the Application beginning on March 25, 2015, in Council

Chambers of the Audrey P. Beck Municipal Building located at 4 South Eagleville Road, Mansfield (Exhibit DEEP-1).

10. On March 5, 2015, a prehearing conference was held, during which the parties advised the Hearing Officer that there were no objections to the Parties' respective lists of issues, witnesses and proposed exhibits. The DEEP Staff and representatives for the Applicants were present. The dates and procedures for the public and evidentiary hearing were reviewed.

11. The Hearing Officer held a site visit on March 10, 2015, at 1:00 pm. A map of the route and stops during the site visit was entered as Exhibit App-10. The public comment portion of the hearing concluded on March 25, 2015, and the hearing was continued to the DEEP headquarters in Hartford on March 26, 2015, beginning at 10:00 a.m. The public was given until April 15, 2015, to submit written public comments to the Hearing Officer, at which time the hearing in this matter concluded and the record was closed. The parties were directed to file post hearing briefs, including proposed findings of fact and conclusions of law, on or before May 15, 2015.

12. Prior to the hearing, prefiled exhibits were received from the Applicant and from the DEEP Staff. Among their exhibits, the Applicants submitted resumes and prefiled testimony for David Radka, Jason Coite, and David Murphy (Exhibits App-4, App-5, App-6, App-7, App-8, and App-9). The DEEP Staff submitted credentials and prefiled testimony for Douglas Hoskins (Exhibit DEEP-19 and DEEP-20).

III. Project Description

A. Proposed Diversion

13. The proposed project involves the withdrawal of surface water from the Shenipsit Lake Reservoir and the transfer of water from one distribution system to another where the combined maximum withdrawal from any source supplying the system or interconnected

systems exceeds fifty thousand (50,000) gallons during any twenty-four hour period, and is therefore considered a regulated activity under the Water Policy Diversion Act (Conn. Gen. Stat. § 22a-365 et seq., R.C.S.A. § 22a-377(c)-1(a)(4). Specifically, the Project entails the installation of approximately five miles of public water supply distribution main along Connecticut Route 195 beginning at Anthony Road and continuing to a point of connection with the UConn water system near Moulton Road. (Ex. App-8 at 2; Ex. App-10.) Additionally, a water main lateral will be extended to connect the proposed main with the Connecticut Water Company's Jensen's community water system and the existing water pumping station in Tolland will be upgraded in order to accommodate the maximum requested diversion quantity of 1.85 mgd and other associated appurtenances such as pressure reducing valves and metering vaults. (Ex. App-8 at 2.)

14. The proposed diversion would provide potable water to the UConn main campus in Storrs, Connecticut, as well as areas nearby to the UConn campus in the northerly part of the Town of Mansfield. (Ex. App-8 at 2; Ex. App-1.)

15. The Project will also provide for fire protection along the pipeline route and allow for individual properties and existing community and non-community water systems along the regional pipeline to have a redundant source of supply available should their wells have water quality or quantity issues. Finally, the proposed diversion will allow for connection to Connecticut Water's Jensen's system. (Exhibit App-1: Attachment D4, Section 4.16 and Attachment Q, Section 7.6.2; Ex. App-8 at 3.) As a result, the proposed diversion would serve to augment already existing supplies that are reduced or eliminated during drier periods and during periods of increased demand. (Ex. App-8 at 3.)

16. The diversion would be an interbasin transfer: it would draw water from the Shenipsit Lake Reservoir in the Hockanum River Basin and deliver it to the Willimantic and Fenton River

Basins. Most wastewater generated from the diversion would be processed through the UConn Water Pollution Control Facility and eventually be discharged to the Willimantic River. (Ex. App-1, Att. D4 §§ 4.3, 4.8; Ex. App-9 at 6)

B. Site Description

17. The Shenipsit Lake Reservoir has been used for public drinking water supply since the 1860s. It currently supplies water to the CWC's Northern Western system for providing water to its customers. Additionally, CWC has an on-going recreation program on the Reservoir, approved by the Department of Public Health ("DPH"), that permits fishing and electric-powered or oar-powered boating on the Reservoir consistent with regulatory requirements. There are hiking trails around the Reservoir. (Ex. App.-1, Att. D4; test. D. Radka, Tr. 37-38.)

18. The Reservoir is approximately 68 feet deep at its deepest point and has a volume of over five billion gallons of water. The Reservoir is predominantly recharged by rainwater and tributaries flowing into the Reservoir. In particular, a one inch of rain from a quick rain storm (where most of the rain runs off) would result in a 278 million gallon influx of water into the Shenipsit Lake Reservoir. (test. D. Murphy Tr. 46-47, 57:15-24.)

19. The Hockanum River is downstream of Shenipsit Lake Reservoir and provides cold water habitat for fish and other wildlife. Since the initiation of the stream flow standards currently in effect, CWC has made daily releases (typically 3.24 cubic feet per second ("cfs")) downstream to the Hockanum River, except for a 1 to 5 day window in February or March when there is a freshet release of 37.5 cfs release. (test. D. Radka, Tr. 34:13-24.)

20. The proposed pipeline will be 16 inches in diameter. The pipeline route will be installed underground throughout its length, except where it crosses the Willimantic River and

nearby railroad line. In these two instances, the pipeline will be hung from the bridges already in place for these crossings. (Ex. App-1, Att. D4 § 2.3; test. D. Murphy. Tr. 61: 18-22.)

21. The pipeline will begin on Route 195 southeast of Anthony Road in Tolland. It will proceed along 195 to the delivery point, immediately west of Route 195 on UConn-owned land near UConn's W-Lot parking area and the High Head tanks, immediately south of 1521 Storrs Road, and across from 15 Moulton Road. A 12-inch diameter distribution main will be installed west along Route 44 to provide service to the remainder of the proposed Mansfield Four Corners service area, including the Jensen's community. (Ex. App-1, D4 § 2.3, Att. G; App-10.)

22. Throughout its length, the water main will be installed either in the paved roadway or the shoulder, within the right-of-way and will not result in any construction in the wetlands along the route (test. D. Murphy, Tr. 61: 12-22.)

IV. STATUTORY AND REGULATORY BACKGROUND

A. Environmental Impact Evaluation

23. As a state entity, before beginning the Application process itself, the University, pursuant to the Connecticut Environmental Policy Act, Conn. Gen. Stat. §§ 22a-1, *et. seq.* ("CEPA"), initiated an Environmental Impact Evaluation ("EIE"). (Ex. App-1 Att. Q, EIE; test. J. Coite; Tr. 16:3-8.)

24. Pursuant to P.A. 11-57, Section 92, the University, in preparing the EIE also worked in consultation with the Town of Mansfield regarding the supplemental source of water supply that was sought, including the needs of the Town of Mansfield in areas near the UConn campus. The EIE evaluated several alternatives:

- development of other local well locations (Mansfield Hollow Lake and Willimantic River);
- interconnection with the Connecticut Water Company;

- interconnection with the Windham Water Works;
- potential modification of existing campus (Fenton River) well system sources;
- interconnection with the Metropolitan District Commission system; and
- no action / no build.

(Ex. App-1, Att. Q EIE; p. ES-4, §§ 5-11; App-7 at p. 4; test. J. Coite Tr: 16:16-17:7, 26:15-27:13, 29:28-30:6.)

25. The EIE process included three public informational meetings on June 28, 2011; January 24, 2012; and June 21, 2012. Each informational meeting corresponded to a thirty day public comment period. (Ex. App-7 at 18-19; test. J. Coite Tr. 17:8-18:2.)

26. The University also communicated with and provided copies of the EIE to several Connecticut state agencies and municipalities, including the Council on Environmental Quality ("CEQ"), the DEEP, the DPH, the Office of the State Archeologist, the State Historic Preservation Office ("SHPO"); and the Towns of Mansfield, Coventry, Windham (via Windham Water Works ("WWW") representatives), Tolland, and Bolton. (Ex. App-1, Att. D-4, EIR, p. 1-3; Att. Q, ROD § 1.1; Ex. App-7 at 19; test. J. Coite Tr. 18:15-21.)

27. The EIE fully evaluated each of the proposed alternatives. In particular, the University evaluation for each alternative included: impacts to public water supplies, other public utilities, and services; wetland impacts; fisheries and other biological concerns; wastes; and other environmental issues; feasibility; compatibility with land use and zoning; socio-economic impacts; community facilities and services; aesthetics; and cultural resources. (Ex. App-1, Att. D-4, EIR, p. 1-3; Att. Q, ROD § 1.1, Office of Policy and Management ("OPM") memo dated September 16, 2013; Ex. App-7 at 19-21; test. J. Coite Tr. 20:6-21:9.)

28. The Final Record of Decision ("ROD") for the EIE was submitted to the Connecticut Office of Policy and Management in July 2013 and approved in September 2013. The final statement of water need for the Town of Mansfield and UConn as presented in the ROD (including UConn's NextGenCT project authorized subsequent to publication of the EIE) indicates that an additional water supply volume of 1.39 mgd (average day) and 2.20 mgd (peak day) is needed by 2060. The interconnection alternative with CWC was identified as the preferred alternative to address the combined needs of UConn and the Town of Mansfield. The CWC alternative was selected in consideration of the following:

- CWC pipeline routes are most consistent with the document *Conservation and Development Policies. The Plan for Connecticut 2013-2018* released by the Connecticut Office of Policy and Management in June 2013 ("CDP Plan"). The proposed regional pipeline primarily traverses Priority Funding Areas or Balanced Priority Funding, as defined in the CDP Plan.[1] Potential impacts associated with the CWC alternative related to potential development and other environmental concerns can be readily mitigated;
- CWC is currently mitigating withdrawals from Shenipsit Lake Reservoir and can continue to directly mitigate additional withdrawals from its water supply source;
- CWC provides the lowest construction cost alternative;
- CWC provides the lowest water cost alternative;
- CWC does not require a "take or pay" contract (i.e. pay for entire allocated volume of water even if not used);
- CWC supply alternative is capable of a phased-implementation approach; and
- CWC supply alternative presents the shortest duration of time for implementation.

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[1] Priority Funding Areas are classified by Census Blocks that include: designation as an Urban Area or Urban Cluster in the 2010 Census; boundaries that intersect a ½ mile buffer surrounding existing or planned mass-transit stations; existing or planned sewer service from an adopted Wastewater Facility Plan; existing or planned water service from an adopted Public Drinking Water Supply Plan, and; local bus service provided 7 days a week. State agencies can proceed with growth-related projects in Priority Funding Areas without an exception. (*Conservation and Development Policies: The Plan for Connecticut, 2013-2018* ("CDP Plan").

Balanced Priority Funding Areas meet the criteria of both Priority Funding Areas and Conservation Areas. State agencies that propose certain actions in these areas must provide balanced consideration of all factors in determining the extent to which it is consistent with the policies of the State CDP Plan.

(Ex. App-1, Att. Q, ROD at ES-1, 75 – 76, OPM Memo September 16, 2013; DEEP-7 at 1; DEEP-19 at 3; test. J. Coite Tr. 23:1-24:8.)

B. Water Diversion

The Applicants provided the following information regarding the proposed diversion:

1. Reasons and Need for the Diversion

29. The projected water demand of the University, including the projected demands from the Tech Park and NextGenCT projects, and the Town of Mansfield Four Corners area is projected to require an additional 1.18 mgd to meet average day demands, and an additional 1.85 mgd to meet peak day demands, through 2039 (the 25 year draft permit term) and demands are expected to increase to 1.39 mgd (average day) and 2.20 mgd (peak) through 2060. (Ex. App-1, Att. Q EIE § 1.2; Ex. App-8 at 7-8; Ex. App-9 at 4-5; DEEP-19 at 2; test. J. Coite Tr. 12:6-11; 15:3-9.)

30. UConn's existing water supply wellfield system is subject to restrictions on withdrawals based on recent studies of impacts on stream flow and fisheries habitat. UConn's 2011 Water Supply Plan incorporates these environmental restrictions on wellfield withdrawals and identifies available supply shortfalls relative to projected demand and margin of safety standards. (App-1, D2 at 2-4 to 2-7; App-7 at 5-6);

31. Additionally, development of a groundwater supply source in the vicinity to Mansfield Four Corners was not feasible. (Ex. App-1, Att. Q, EIE § 4.11.2, App-7 at 8; Ex. App-8 at 8.)

32. The proposed diversion is needed in order "to provide additional water supply to UConn that will maintain a long-term system margin of safety greater than 1.15 while meeting existing and committed demands . . . and to provide additional water supply to support future growth and redevelopment in the town of Mansfield consistent with its Plan of Conservation and

Development, including but not limited to the Mansfield Four Corners area, a planned elderly and assisted living facility, and a number of residential development areas in the town." (Ex. App-1, Att. Q, EIE at 1-4; Ex. App-9 at 5.)

33. DEEP has determined that this proposed diversion fills a documented need for water. (Ex. DEEP-9.)

34. DPH has recommended approval of the proposed diversion in order to "alleviate peak demand period supply deficiencies and plan for future water needs of the University and surrounding community." (Ex. DEEP-6, DEEP-12.)

2. Description of the Existing Water Systems

35. Connecticut Water Company's Northern Western System serves approximately 32,000 customers in all or portions of the towns of East Windsor, East Granby, Ellington, Enfield, South Windsor, Somers, Suffield, Tolland, Vernon and Windsor Locks. Supply is provided by the Shenipsit Lake Reservoir and twenty-eight wells located at eleven wellfields irregularly distributed throughout the service area. (Exhibit App-1, Att. Q, EIE, Table 4.5.1; App-1, Att. D4, Section 2.2).

36. Average system demand for the Northern Western System, based on the five year period 2009 – 2013, was 9.18 mgd, while peak demand averaged 14.68 mgd. Available supply from all active sources was an identified 16.69 mgd. Wellfield supply improvements have increased system available supply to 17.2 mgd. (Ex. App-1, Att. Q, EIE, Table 7-1.2; Ex. App-8 at 3-4)

37. UConn currently uses eight wells divided between the Fenton River Wellfield and the Willimantic River Wellfield to supply UConn's Main and Depot campuses. The maximum registered withdrawal limit (combined wellfields) is 3.15 mgd. In light of seasonal flow changes, however, withdrawals from the Fenton River Wellfield are often not available for the

months of June through October. Additionally, the interim safe yield (1.48 mgd) of the Willimantic River Wellfield is lower than the registered diversion (2.3077 mgd). As a result, the actual total available supply from UConn's current water system ranges from 1.48 mgd to 2.32 mgd. (Ex. App-1, Att. D4, Section 2.1; Ex. App-9 at 6; test. J. Coite Tr. 10:3-12, 11:7-14.)

3. Locations of Withdrawals and Discharges

38. The Applicants documented the locations of the withdrawals and discharges in their Application. Specifically, water for the requested action will be withdrawn from Shenipsit Lake Reservoir through the Rockville Water Treatment Plant. (Ex. App-1, Att. D4, § 2.2)

39. The water diverted from the Shenipsit Lake Reservoir (in the Hockanum River Basin) will be transferred to the Willimantic River and Fenton River sub-regional basins. The water transferred through the regional pipeline that is not consumed will be discharged through private septic systems of Mansfield users, or discharged to the sanitary sewer and will be treated at the UConn Water Pollution Control Facility ("WPCF") and released into the Willimantic River. Note, however, that for the purpose of the Application, it was assumed that all diverted water would be discharged through UConn's WPCF. (Ex. App-1, Att. D4, §§ 4.3, 4.8; Ex. 9 at 6.)

4. Quantity, Frequency and Rate of Water Diversion

40. UConn and the Town of Mansfield will require approximately 1.18 mgd of additional water to meet average day demands and 1.85 mgd of additional water to meet peak day demands in 2039. The applicants therefore requested a 1.85 mgd permit limit. The maximum frequency of withdrawal will be 24 hours a day 365 days per year. (Ex. App-1, Att. D4 § 2.5; Ex. App-9 at 6.)

5. Length of Time for Which the Diversion is Sought

41. The Application seeks the approval to divert water for 25 years (the maximum allowed by the Act). (Ex. App-1, Att. D4, Section 2.4; test. D. Murphy Tr: 65:8-13.)

42. The Applicants' analysis in the EIR addresses the potential impacts of the diversion over a 25 year period. (Ex. App-1, Att. D4, 2-18, 4-8, 4-14, 4-29.)

6. Environmental Impact Report: Effects of the Proposed Diversion

43. Because the proposed diversion would result in an interbasin transfer, the Applicants completed and submitted an Environmental Impact Report ("EIR") as part of their application. The Applicants evaluated a number of factors as part of the EIR in order to demonstrate that this diversion would not result in any significant adverse environmental impacts to the groundwater table, wetlands, and/or surface waters near or in Shenipsit Lake Reservoir (donor basin) or the Willimantic River (receptor basin). Based on these analyses and as further described below, the Applicants assessed possible impacts on wetlands, fish and wildlife, local water quality, stream flows, recreation, flood management and certain other factors. Based on the provided information, the EIR contains all of the information required under the Water Diversion Policy Act and applicable regulations. At the prescribed diversion of no more than 1.85 mgd, this analysis showed no unacceptable impacts to donor or receptor basins, specifically, the Shenipsit Lake Reservoir, Hockanum River, or the Willimantic River.

a) Lake Levels

44. Shenipsit Lake Reservoir has a storage volume of more than 5 billion gallons and a maximum depth of 68 feet. (Exhibit App-1, Attachment D4, § 4.0; test. D. Radka, D. Murphy Tr. 46-48, 54-57).

45. Shenipsit Lake Reservoir's DPH-approved safe yield is 9.8 mgd. Regulations require the Applicants to calculate the effect the diversion on lake levels in the hypothetical and unlikely event that a withdrawal equal to the requested average daily diversion (1.18 mgd) occurred during a year with *zero recharge* to the reservoir (i.e., no precipitation, snow melt, etc.). This

analysis showed that the water elevation in the reservoir would be lowered by approximately 2 to 3 feet under such a scenario. (Ex. App-1, Att. D4, § 4.1).

46. By comparison, the Applicants conducted a similar analysis for a moderately dry year like 2005. In 2005, this diversion would have resulted in reservoir elevations 0.7 feet lower in June and a maximum of 0.8 feet lower in August. (Ex. App-8 at 7; DEEP-7; test. D. Murphy, D. Hoskins, Tr. 55-57, 71:23-72:3.)

47. CWC currently monitors, and will continue to monitor, lake levels on a daily basis. (test. D. Radka, Tr. 48-49.)

48. Based on the analysis done by the Applicants (and with which DEEP staff concurred), the impact on lake levels is minimal and should recover on a yearly basis. (Ex. App-8 at 7; DEEP-7; test. D. Murphy, D. Hoskins, Tr. 55-57, 71:23-72:3.)

b) Effect of diversion on stream flows

49. DEEP staff determined that the most critical environmental issue associated with the proposed diversion was to ensure that any impacts to the Hockanum River were mitigated to protect the aquatic resources. (Ex. DEEP-8, DEEP-19 at 3.)

50. Downstream flow releases are currently made from the Shenipsit Lake Reservoir to the Hockanum River in accordance with the applicable Minimum Stream Flow Standards (Sections 26-141a-1 through 26-141a-8 of the Regulations of Connecticut State Agencies). These release rates will eventually be supplanted by operating rules under the newer Streamflow Standards and Regulations (R.C.S.A. §§ 26-141b-1 through 26-141b-8) ("Newer Streamflow Regulations"), as implemented by proposed permit condition no. 15. (Exhibit DEEP-21).

51. The Revised Draft Permit will require CWC to comply with recently adopted streamflow releases that more closely mimic natural water flow, i.e., periods of higher releases and periods of lower releases. The Newer Streamflow Regulations also specify Applicants'

obligations under certain drought conditions. The Revised Draft Permit incorporates those requirements. Accordingly, CWC will continue to ensure that there are releases to the Hockanum River in accordance with streamflow requirements. (Ex. DEEP-19 at 3-4; DEEP-21 ¶15; test. D. Radka Tr. 35:8-18, 36:22-37:12.)

52. Additionally, the Revised Draft Permit requires CWC to initiate new stream flow releases in a shortened time period (as compared to regulatory requirements). Under the regulations, the new stream flow releases are not required until ten (10) years after classification of the Hockanum River. R.C.S.A. § 22a-141b-6. The proposed permit requires compliance with the new streamflow releases within ten (10) years of issuance of the permit. (DEEP-21 ¶ 15, test. D. Radka, D. Hoskins Tr. 34-35; 72:18-25.)

53. Providing minimum and bio-period based cold water releases from Shenipsit Lake Reservoir, as provided by the Revised Draft Permit, will not negatively impact, and will likely result in overall improvement to, fisheries habitat in the Hockanum River. (Ex. App-8 at 7; DEEP-8 at 1; DEEP-19 at 3-4, test. Hoskins, Tr. 70-71).

54. The requirements of the proposed diversion permit will mitigate any potential adverse impacts of the drawdown to fish habitat, existing water uses and potential conflicts, public and private wells, groundwater recharge and discharge, wastewater treatment and waste assimilation, water quality, wetlands and wetland habitats, flora and fauna, flood management, recreation, power generation, agriculture, social and economic factors downstream of the Shenipsit Lake Reservoir, and along the Hockanum River. (Ex. App-1, Att. D4 §§ 4.3 through 4.16, Att. I, Att. J, and Att. L; Ex. App-8 at 7; Ex. App-9 at 7, 10-11; test. D. Radka Tr. 34-37.)

55. DEEP has determined that the streamflow releases contemplated by permit condition no. 15 will provide "a more natural variable downstream condition throughout the year." (test. D. Hoskins, Tr. 70-71; Ex. DEEP-8; DEEP-19 at 3.)

56. The EIR fully analyzed the effect of the proposed diversion using stream flows with the recurrence levels for low flows of seven-day, ten year; seven-day, two year; thirty-day, two-year and annual average flows. (Ex. App-1, D4 § 4.3, App-9 at 7.)

c) Wetlands

57. Wetlands are located in the vicinity of Shenipsit Lake Reservoir, along the Hockanum River (downstream of the Shenipsit Lake Reservoir), and in certain locations near the proposed pipeline. Impacts to these wetlands will be minimal. (Ex. App-1, Att. D4 § 4.10, Att. J; Ex. App-9 at 7; test. D. Murphy Tr. 62:1-4.)

58. There are few wetlands surrounding the Reservoir in light of the relatively small percentage of shallow water as compared to the size of the Reservoir and DEEP determined that typical water use is not expected to significantly impact the limited wetland habitats along the Shenipsit Lake Reservoir. (Ex. DEEP-7 at 3, DEEP-19 at 2, 4.)

59. In particular, wetlands surrounding the lake are adapted to the annual rise and fall of the water table and therefore should not experience any significant stress as a result of the additional drawdown of the lake—especially in light of the analysis by Applicants showing a drawdown of less than one foot in a moderately dry summer. Accordingly, the Applicants and DEEP staff concluded that the proposed diversion should not have any significant impact on the wetlands in the vicinity of the Shenipsit Lake Reservoir. (Ex. App-1 Att. D4 § 4.10; DEEP-7 at 3; test. D. Murphy Tr. 60:24-61:9, 62:1-2.)

60. Although the water diversion will reduce spillage into the Hockanum River during periods of high water, it is expected that the streamflow releases from the Shenipsit Lake

Reservoir will continue to support the riparian wetlands and therefore, any impacts on the riparian wetlands along the Hockanum River should also be minimal. (Ex. App-1 Att. D4 § 4.10; DEEP-7 at 2; DEEP-21 ¶ 15.)

61. Finally, the proposed pipeline will be installed either within the paved roadway or right of way and there will be no construction occurring in the wetlands near the roadway. DEEP has determined that, as a result, construction will not impact aquatic resources along the route. (Ex. App-2, Response 2, Ex. DEEP-7 at 3; DEEP-19 at 3.)

62. Where small streams must be crossed, the proposed water main will either go above or over the culvert that is already in place. The pipeline will be installed on the side of the Route 195 bridge over the Willimantic River and no in-water work will be conducted. Best practices and erosion and sediment control provisions will be utilized by the Applicants to minimize the impacts of the construction work. Accordingly, there will be no impacts to the wetlands. (Ex. App-1, Att. D4 at 4-24, 4-26; App-2, Response 2; Ex. App-9 at 14-15; test. D. Murphy, D. Radka Tr. 61:12-62:4,79:13-24.)

63. Finally, CWC has already registered, and DEEP has approved the registration, for the General Permit for Discharge of Stormwater and Dewatering Wastewater from Construction Activities. (Ex. App-13, test. D. Radka Tr. 80:20-24.)

d) Waste Assimilation

64. Because releases from the Shenipsit Lake Reservoir will continue to be made in accordance with Streamflow Regulations, there will be no impact to wastewater treatment and waste assimilation within the Hockanum River Watershed during low flow periods, or otherwise. (Ex. App-1 Att. D4 § 4.8; DEEP-21, ¶ 15.)

65. For the purposes of the diversion permit, Applicants conservatively assumed that all water transferred from the Shenipsit Lake Reservoir would discharge to UConn's Water

Pollution Control Facility ("WPCF"). This would result in an increase of 1.18 mgd in wastewater flow to the UConn WPCF, creating a total discharge of 2.50 mgd—or 83% of its average daily flow capacity. (Ex. App-1 Att. D4 § 4.8; App-2 Response 7.)

66. DEEP staff further determined that there would be no impact on wasteload allocation in the Willimantic River as a result of the proposed diversion. (Ex. DEEP-9.)

e) Agriculture

67. Agriculture is not permitted immediately adjacent to the Shenipsit Lake Reservoir. The areas where it does occur along Shenipsit Lake Reservoir Road are approximately greater than 520 feet in elevation, an elevation higher than of the Shenipsit Lake Reservoir elevation of 511 feet. Applicants analyzed this and other areas and concluded that there would be no impact to agricultural areas near Shenipsit Lake Reservoir and along the pipeline route. (Ex. App-1 Att. D4 § 4.15.)

f) Fish and wildlife

68. The Applicants analyzed the amount of water that would be withdrawn, projected impacts to surface elevation of the Shenipsit Lake Reservoir, seasonal inflow and the Reservoir's typical dissolved oxygen and temperature regimes and determined that only minimal impacts to fisheries resources associated with water level fluctuations are expected. (Ex. App-1 Att. D4 at 4-8 to 4-10.)

69. The Hockanum River supports a diverse variety of fish species which are sustained by the coldwater releases from the Shenipsit Lake Reservoir. (Ex. App-1 Att. D4 § 4.4.)

70. The continued obligation to make releases from the Shenipsit Lake Reservoir (as discussed in subsection (b), above) is designed, in part, to ensure that the diversion does not have significant impact on fisheries resources in the Hockanum River. (DEEP-21 ¶ 15, test. D. Radka, D. Hoskins Tr. 34-35; 72:18-25.)

71. The Applicants reviewed the CTDEEP's on-line Natural Diversity Data Base ("NDDB") Geographic Information System ("GIS") in order to identify any known populations of Federal or State Endangered, Threatened, or Special Concern Species for areas surrounding Shenipsit Lake Reservoir, along the Hockanum River and along the regional pipeline route. The Applicants filed requests with the NDDB for a report covering the project route and alternatives, and agency responses indicated the potential presence of the American Kestrel (Threatened), Savannah Sparrow (Species of Special Concern), Southern Bog Lemming (Species of Special Concern) and Wood Turtle (Species of Special Concern). (Ex. App-1, Att. D4 § 4.11, Att. J generally and App. E. to Att. J.)

72. Based on the Applicants' NDDB investigation and the CTDEEP report, there is the possibility of there being two species of special concern associated with wetlands present in the area of the construction of the pipeline: the Southern Bog Lemming and the Wood Turtle. (Ex. DEEP-19 at 4, test. D. Murphy Tr. 63-63.)

73. The Revised Draft Permit includes special conditions to address the potential presence of these species in general and during construction. (DEEP-21 ¶¶ 24, 25; test. D. Murphy Tr. 62-63.)

74. The Wood Turtle is more likely to be found near running water (e.g., streams and tributaries) than near the Shenipsit Lake Reservoir. (Ex. App-1 Att. D4 § 4.11.)

75. There is no construction occurring near streams or other running water; therefore, the impact to the Wood Turtle should be minimal (if any). Furthermore, drawdown already occurs on a yearly basis and is not a permanent loss of habitat. Finally, the Revised Draft Permit adequately addresses how to protect the Wood Turtle if it is encountered during construction and

any impacts to the Wood Turtle can be mitigated. (Ex. App-1 Att. D4 § 4.11; Ex. App-9 at 11; DEEP-6; DEEP-7 at 3; test. D. Murphy, D. Hoskins Tr: 63:1-8, 63:19-21, 72:4-12.)

76. Likewise, the Southern Bog Lemming is associated with wetlands, but has not been sighted in the area of the proposed diversion in over 50 years. However, the Revised Draft Permit adequately addresses what must be done if a Southern Bog Lemming is encountered and accordingly there should be no impact to this species. (Ex. App-1 Att. D4 § 4.11; DEEP-6; DEEP-7 at 3; DEEP-21 ¶ 25; test. D. Murphy, D. Hoskins Tr. 63:9-20, 72:4-12.)

g) Water Supplies and Impacts to Wells

77. The Applicants have demonstrated that the proposed diversion will not impact water supply to existing customers. The DPH's issuance of a sale of excess water permit further supports this conclusion. DPH has reviewed the CWC's ability to transfer water from CWC's Western System to UConn's Water System and has determined that CWC is able to transfer the requested volume of water while continuing to maintain an adequate margin of safety. (Ex. App-11; test. D. Radka, Tr. 39-40, 44-45.)

78. CWC's Western System is undergoing improvements and as a result, any additional demand on the Company's water supplies will be readily managed without meaningful impact to supplies that will serve existing or future customers within the 25-year permit timeframe. In particular, CWC is upgrading its Rockville Water Treatment Plant and has received approvals from the local planning and zoning commission for the work required to construct the upgrade and this work is scheduled to begin in 2015. The upgrades to the Rockville Water Treatment Plant would occur regardless of this diversion project and is a separate project, requiring separate approvals. (Ex. App-1, Att. D4, § 2.2; Ex. App-8 at 6; App-12, test. D. Radka Tr. 40-41)

79. Peak demand for the UConn Water System will occur at a different time than the peak demand for CWC's existing customers. Specifically, UConn water system demands

typically peak in late August and September as the student population increases; by comparison, Connecticut Water's Western System peak demand typically occurs between late June and mid-July. Accordingly, it is unlikely, that the requested maximum diversion will be additive to the peak demand for the Western System. (Ex. App-8 at 6.)

80. Other public water supply wells are located downstream of the Shenipsit Lake Reservoir along the Hockanum River, or within the same aquifer as the Reservoir. These include: the CWC Vernon wells; the Vernon Village, Inc. wells; the Manchester Water and Sewer Department ("MWSD") New State Road wells located in Manchester; and the MWSD Love Lane well along the South Fork Hockanum River. (Ex. App-1, Att. D4 § 4.5, 4.6.)

81. These wells are all located downstream of the Vernon Water Pollution Control Facility ("WPCF"). Much of the withdrawal from the Shenipsit Lake Reservoir that is not related to this diversion is returned to the Hockanum River at the Vernon WPCF. This fact, in combination with the continued releases from the Reservoir (see Section IV(B)(6)(b)), will ensure that these downstream public and private wells are not impacted by this diversion throughout the 25-year term of the proposed permit, taking into account projected future demand. (Ex. App-1, Att. D4 § 4.5, 4.6.)

82. Some homeowners have expressed concern regarding the potential impacts to their private wells. The Applicants have researched this issue and their analysis of potential impacts on public and private wells over the 50-year planning period adequately addresses concerns that have been raised about the drawdown on drinking water wells. (Ex. App-1, Att. D4 § 4.6; App-2, Response 4; test. D. Murphy, Tr: 58-59.)

83. In particular, the wells in the area are bedrock wells that are unlikely to be significantly affected by drawdown from Shenipsit Lake Reservoir. The bedrock wells that

surround the Reservoir have first draw on the groundwater—before the groundwater even reaches the Reservoir, and even if the water table lowers by two feet as a result of the drawdown and a similar decrease in lake levels occurs, the bedrock wells are deep enough so that such a decrease would not affect the ability of the wells to produce sufficient water for the residents. Accordingly, there is no evidence that the proposed diversion would cause or worsen problems regarding private wells in the area. (test. D. Murphy, Tr: 58-59; Ex. App-1, Att. D4 § 4.6; App-2, Response 4.)

84. In response to a request from DEEP, the Applicants also researched potential impacts on two private wells near Shenipsit Lake Reservoir. Applicants did not find any evidence of shallow, dug wells and, therefore, any drawdown in the Shenipsit Lake Reservoir should not affect these private wells. (Ex. App-2, Resp. 4.; test. D. Murphy, Tr: 59:9-17.)

h) Recreation

85. Potential impacts on instream flows in the Hockanum River will be mitigated by continued releases of water from Shenipsit Lake Reservoir, such that wading and fishing in the River will continue. The discharges through the UConn wastewater treatment system to the Willimantic River may have positive impacts on water-based recreation in that river. Finally, the recreational program associated with the Shenipsit Lake Reservoir will continue and there is no anticipated change to the recreational use of the reservoir. (Ex. App-1, Att. D4 § 4.13; App-9 at 14; test. D. Radka Tr. 37-38.)

i) Flood Management

86. The transfer of water to the Willimantic River should not have any impact on flooding conditions of the Willimantic River. The 100-year flood level in the Willimantic River can be thousands of cubic feet per second and the existing UConn discharge is only 3 cubic feet per second—less than 0.1% of the total flood flow. This additional discharge is not significant

enough to result in increased flooding in the Willimantic River under a 10-year, 50-year, 100-year or 500-year flood event. (Ex. App-1 Att. D4 § 4.12; test. D. Murphy Tr. at 64.)

87. Additionally, the Applicants' have submitted a Flood Contingency Plan "to prevent damage to construction equipment and local infrastructure, as well as to protect the safety of personnel and downstream populations during excavation activities associated with the installation of the Tolland-Mansfield Regional Pipeline and interconnection." (Ex. App-1 Att. I, 1.)

7. Alternatives

88. Alternatives to the proposed diversion, including a study of cost factors, feasibility, and environmental effects of such alternatives, as contemplated by CGS § 22a-369(8) were first detailed in the UConn EIE and the ROD for the project. (Ex. App-1, Att. D4 § 3.0; Att. Q, EIE, ROD test. J. Coite, Tr: 26:5-22; 29:10-30:6.)

89. A total of six alternative sources of water supply, and the "no action" alternative, were considered, including the following:

- development of other local well locations (Mansfield Hollow Lake and Willimantic River);
- interconnection with the Connecticut Water Company;
- interconnection with the Windham Water Works;
- potential modification of existing campus (Fenton River) well system sources;
- interconnection with the Metropolitan District Commission system; and
- no action / no build.

(Ex. App-1, Att. Q at EIE, ES-4; App-7 at p. 4; test. J. Coite Tr: 16:16-17:7, 26:15-27:13, 29:28-30:6.)

90. As required by CEPA, each of the alternatives was assessed in terms of its ability to meet the project's purpose and need, feasibility and potential environmental impacts. These alternatives included an assessment of the University's existing water conservation plan (discussed further below). Although more than one alternative was deemed feasible from strictly an engineering standpoint (e.g., Windham Water Works), UConn's evaluation showed that the CWC alternative, the requested diversion, was both feasible and prudent with respect to environmental effects, economic viability, and other conditions. (Ex. App-1 Att. D4 and Att. Q. EIE, §§ 3 to 11; ROD, App. F test. J. Coite, Tr: 18-21.)

91. The reasons why CWC alternative was chosen are addressed above in Section IV(A). DEEP staff supported selection of the preferred alternative as evidenced by the terms of the Revised Draft Permit offered for approval herein. (Ex. DEEP-21).

a) No Action Alternative

92. As part of the EIE process, UConn specifically considered a no action alternative as required. This no action alternative considers UConn's significant conservation efforts, which since 2005 have reduced water demand by 250,000 gallons per day ("gpd") despite growth in population and facilities served. UConn has also undertaken a number of efforts to conserve water and prevent the loss of water through leaks. These efforts include, but are not limited to: replacement of inefficient infrastructure and fixtures, demolition of aging facilities and constructing new LEED certified buildings; and construction of a reclaimed water facility that replaces potable water with treated effluent at its campus cogeneration plant. However, despite these efforts, UConn still needs additional water. For this reason, and in light of the planned Tech Park and NextGenCT initiatives, as well as the related need for water associated with these developments, and those identified by the Town of Mansfield, , a no action alternative is not an appropriate course for UConn. (Ex. App-1, Att. D10, Att. Q, EIE § 5, App-7 at 11.)

b) Other Alternatives

93. The relocation or replacement of the Fenton River Wellfield Well A would not meet the project purpose and need given the inability to provide additional water, and the continuing necessity to operate under the withdrawal limitations of the Wellfield Management Plan. (Ex. App-7 at 20, test. J. Coite, Tr: 26-27.)

94. The Windham Water Works ("Windham") alternative was not chosen given that this alternative would require creation of additional supply sources to meet water planning benchmarks before 2028. In addition, service to UConn and Mansfield would require a new diversion permit, treatment plant expansion and new residuals settling basins. Further, all costs of permitting and development of infrastructure improvements at the Windham facility, including Windham's costs, would have to be funded solely by UConn, and additional operating expenses for serving UConn and Mansfield would be allocated solely to those users. Connection with Windham would also be conditioned upon ensuring that existing Windham customers would pay no rate increase as a result of the UConn/Mansfield service connection. The development costs (approximately $44,000,000) and water rates for the Windham Water Works alternative also exceeded the corresponding costs related to a supply connection with the Connecticut Water Company. (Ex. App-7 at 20 - 21)

95. The alternative of supplying water from the Metropolitan District Commission ("MDC") presented the longest pipeline construction route (approximately 18 miles) and highest connection construction costs (approximately $51,000,000). The MDC charter would obligate UConn to bear the costs of pipeline construction. In addition, the MDC would only serve UConn and Mansfield on a "take or pay" basis. The MDC would also impose an additional charge (estimated at $500,000 per annum) based on connection restrictions along the pipeline route as a result of the measures to mitigate induced development. (Ex. App-7 at 21)

96. The alternatives analysis also included consideration of the development of a new groundwater supply source. The options considered for this approach included locations along the Willimantic River and Mansfield Hollow Lake. The yield from wells at either the Willimantic River or Mansfield Hollow locations were not expected to provide sufficient supplies to fulfill project needs based on an evaluation of geologic conditions. (Ex. App-7 at 21)

97. The interconnection with Connecticut Water Company ("CWC") would originate at the system connection with the Tolland water distribution system. The capital costs of interconnection and treatment facilities (estimated at approximately $19,000,000) would be borne solely by CWC and did not require a "take or pay" contract (i.e. pay for entire allocated volume of water even if not used). Also, the CWC alternative was selected in consideration of the fact that CWC pipeline routes are most consistent with the document *Conservation and Development Policies.' The Plan for Connecticut 2013-2018* released by the Connecticut Office of Policy and Management in June 2013; CWC is currently mitigating withdrawals from Shenipsit Lake Reservoir and can continue to directly mitigate additional withdrawals from its water supply source. (Ex. App-7 at 21-22).

8. Conservation Measures

98. As evidenced by the testimony provided by Jason Coite, and other record evidence, UConn has undertaken significant conservation measures. (Ex. App-1, Att. D10; Ex. App-7 at 11-17; test. J. Coite, Tr. 12-13.)

99. UConn's Water Conservation Plan includes (A) the identification of and cost effectiveness of distribution system rehabilitation to correct sources of lost water; (B) measures which encourage proper maintenance and water conservation; (C) a public information program to promote water conservation, including industrial and commercial recycling and reuse and (D)

contingency measures for limiting water use during seasonal or drought shortages. (Ex. App-1, Att. D10; Ex. App-7 at 11-17; Ex. App-9 at 8-9.)

100. UConn's Water Conservation Plan also meets the requirements of Section 22a-377(c)-2(b) of the RCSA. In particular, it (a) fully describes the policies and goals of the applicant's long range water conservation efforts, explains the actions taken or to be taken in furtherance of such policies and goals, provides an implementation schedule for such actions, and a sets up a detailed program for measuring, in terms of quantities of water saved or to be saved, the effectiveness of the applicant's water conservation efforts; (b) provides the volume of lost or unaccounted for water, based on the average of available data from the five years preceding submission of the application or; and (c) fully describes the applicant's leak detection and repair program and, in the case of an application to divert water for public water supply any leak detection services offered to consumers. (Ex. App-1, Att. D10; App-2; Ex. App-9 at 8-9; Ex. DEEP-19 at 3.)

101. The Applicants will be required by permit condition to continue to implement their Long-range Water Conservation Plans and to maintain a summary of all actions taken each year pursuant to the Long-Range Water Conservation Plan. However, these measures will not be enough to meet the demand for water by UConn and the Town of Mansfield. (DEEP-21 ¶ 21, 23; test. J. Coite, Tr. 13-14.)

9. Social and Economic Development

102. The requested diversion will not result in adverse social and economic impacts. Recreational activities will continue to occur in the vicinity of the Shenipsit Lake Reservoir and the Hockanum River. Further, CWC will fund the project through its existing capital improvement budget. (Ex. App-1 Att. D4 at 4-35)

103. Failure to secure the requested diversion permit could result in reduced commercial and economic development within the Town of Mansfield. By extending public water supply to the Mansfield Four Corners area, concerns regarding contaminated groundwater in that area are eliminated and revitalization is possible. (Ex. App-1 Att. D4 at 4-35.)

10. Interests of Affected Municipalities

104. The Town of Mansfield has indicated that it has no objection to the issuance of the proposed diversion permit. (Ex. DEEP-16.)

105. The Project will also provide for fire protection along the pipeline route and allow existing, proximate community water systems with marginal and/or contaminated wells to obtain adequate supplies of high quality drinking water. Finally, the proposed diversion will allow for connection to Connecticut Water's Jensen's system. (Ex. App-1: Att. D4, Section 4.16 and Att. Q, EIE § 7.6.2; Ex. App-6 at 3.)

106. The project will supply water needed to meet a maximum projected demand of up to 453,400 gpd of water in the Town of Mansfield for the redevelopment of the Four Corners business area, a supply of water for an elderly and assisted living facility and several residential development areas in Mansfield as supported by the town Water and Wastewater Master Plan. (Ex. App-1, Att. Q, EIE, §1.2(3)).

107. The proposed diversion is consistent with the existing interconnection agreement with the Town of Tolland's water system. (Ex. App-1, Att. D4, § 2.2.)

108. The CWC has sufficient water supply to serve its customers in donor basin municipalities, including Ellington and Vernon such that these towns will not be adversely affected by the proposed diversion. Neither Ellington nor Vernon filed comments regarding the proposed diversion. (Ex. App-1, Att. D4 § 2.2; App-11)

109. The public supply wells that serve the Town of Vernon will not be impacted by this diversion throughout the 25-year term of the proposed permit, taking into account projected future demand. (Ex. App-1, Att. D4 § 4.5, 4.6; see also Section IV(B)(6)(g).)

11. Inapplicable Information

110. Certain information identified by RCSA Section 22a-377(c)-2 was not provided by the Applicants because it was not requested by the Commissioner or otherwise required. In particular, the Commissioner did not request, pursuant to RCSA § 22a-377(c)-2(c)(1), that the Applicants provide a plan to reduce lost or unaccounted for water to an acceptable level. Likewise, nor has the Commissioner, under RCSA § 22a-377(c)-2(e), conditioned the permit to require the construction of low flow and higher flow channels if appropriate for protecting aquatic resources. (Ex. App-9 at 9.)

12. Special Permit Conditions

a) New Service Connections

111. One of the concerns raised by members of the public concerned the potential for additional development along the pipeline route in light of the newly available source of water. This concern is addressed by permit condition 26. In particular, new service conditions are "limited to only those proposed land uses of an intensity allowed under local plans of conservation and development as of the date of the Connecticut Office of Policy and Managements' notice of Environmental Impact Evaluation sufficiency (September 16, 2013)." New service connections must be consistent with those local plans of conservation and development. A diversion permit is not an authorization of service connection or a zoning approval and all new service connections require such approval from the appropriate state and local authorities. (Ex. DEEP-21 ¶ 26; test. J. Coite, D. Radka Tr: 25-26, 32-34.)

b) Stream Flow Releases & Discharge Record Keeping

112. This special condition, permit condition 15, is addressed in Section IV(B)(6)(b) above.

c) Metering

113. Permit conditions 17, 18, 19 place requirements on the Applicants to measure the water that is transferred from its Northern Western System to UConn's System and other water users in Mansfield. Changes made from the tentative determination draft to the current Revised Draft Permit were to allow the Applicants more flexibility in the design of the metering system, but ultimately should result in a more accurate measurement. (Ex. App-3, DEEP-21 ¶¶ 17-19, test. D. Hoskins, Tr. 73:1-10.)

d) Leak Detection

114. Permit Condition 20 of the Revised Draft Permit requires the Applicants to conduct system wide comprehensive leak detection of the system every five years and include this information in the annual report prepared for the Commissioner. (Ex. DEEP-21 ¶ 20, DEEP-7 at 4.)

e) Conservation Plans

115. This special condition 21 is addressed in Section (IV)(B)(8) above.

f) Record Keeping and Annual Reporting

116. Applicants will be required to submit annual reports to the Commissioner, addressing specific record keeping requirements. (DEEP-21 ¶¶ 22, 23; DEEP-7 at 5.)

g) Species of Special Concern

117. These special conditions are addressed in Section IV(B)(6)(f) above.

h) Special Permit Condition Modifications

118. The DEEP received comments from CWC during the comment period for the notice of tentative determination to issue the diversion permit. In response, DEEP revised the original draft permit to incorporate in special condition 15 a reference to R.C.S.A. § 22a-141b-6(b) which sets forth new regulatory requirements for minimum streamflow releases during certain drought conditions. Additionally, DEEP revised the metering conditions of the Revised Draft Permit (conditions 17, 18 and 19), to address engineering and record-keeping considerations. (Ex. App-3, DEEP-21).

119. Taking into account the special permit conditions, agreed to by the Applicants, DEEP recommends approval of the Revised Draft Permit. (Ex. DEEP-19 at 5; test. D. Hoskins Tr. 74:2-4.)

V. Public Comments on Proposed Permit

120. The public was provided with an additional opportunity to provide oral and written comments on the proposed Permit as a result of DEEP's receipt of a petition for a hearing on the draft permit. At the public hearing held on the evening of March 25, 2015, twenty individuals commented on the proposed diversion. Seven of the individuals spoke in favor of the proposed diversion, nine individuals opposed the diversion, and the remaining four commenters raised questions about the diversion, but did not directly support or oppose the proposed diversion. (Record of March 25, 2015, Public Hearing (May 12, 2015.))

121. The Mayor of the Town of Mansfield spoke in favor of the diversion and the Town submitted a letter for the record in support. (Ex. DEEP-16) In addition, Ken Rawn, a member of the Mansfield Planning and Zoning Commission requested that the permit be issued.

122. The issues raised by the speakers who were opposed to the proposed diversion fall within three general categories: (a) concerns about the impact that the proposed diversion will

have on development in Mansfield or along the proposed pipeline; (b) concerns about potential impacts on Shenipsit Lake Reservoir and the Hockanum River; and (c) questions about why another alternative was not selected to address the water needs of UCONN and Mansfield.

123. The specific issues raised by those opposed to the project and a proposed finding with respect to each issue follows:

a. **Comment:** Concerns that the water made available through the diversion will allow more intense development in the Mansfield area, particularly because the Town of Mansfield has not yet adopted zoning overlay zones to restrict development consistent with the Town's Plan of Conservation and Development.

Finding: The proposed permit includes a condition to assure that any new connections along the pipeline or a more intensive use of an existing connection will be consistent with the local plan of Conservation and Development as of September 16, 2013. Accordingly, the Revised Draft Permit already addresses the desire to limit future development along the pipeline route without needing to revise the local zoning regulations. Even though Mansfield's decision regarding its local zoning regulations is a local matter that does not factor into whether a diversion permit is approved by the Commissioner, testimony at the hearing indicated that the Town is currently updating its plan of Conservation and Development and zoning regulations with respect to water supply connection restrictions. (test. J. Coite, Tr. 24:9 to 26:2).

b. **Comment:** Questions regarding the historical compliance of UCONN with conditions in other environmental permits.

Finding: There is nothing in the Applicants' compliance history that warrants any additional special conditions or denial of the permit. (Ex. App-1, Att. N.)

c. **Comment:** Questions regarding the length and cost of the pipeline, who is paying the cost of the pipeline, and whether the pipeline would be protected.

Finding: The record reflects that the length of the pipeline will be 5.3 miles and the cost will be paid for by CWC. The pipeline will be constructed primarily of ductile iron, will run underground in most locations, and will be inspected throughout construction. Additionally, the Applicants will use best management practices during construction to protect the pipeline. (App-1, Att. A, A-1; Ex. App-7 at 21-22; test. D. Radka, Tr. 76-79; see also § IV(B)(9) regarding costs.)

d. **Comment:** Whether there would be impacts to Native American artifacts.

Finding: There is no evidence of impacts to Native American artifacts.

e. **Comment:** Concern regarding impacts on wood turtles.

Finding: This is addressed in Section IV(B)(6)(f).

f. **Comment:** Questioned the need for NPDES permits for discharges of water from the pipeline that are not treated by sewage treatment plants.

Finding: This is an application for a diversion permit. Once water is used, it is up to the user of the water, including residential users, to secure any applicable permits or authorizations, to discharge wastewater.

124. The specific issues raised by those opposed to the proposed diversion with respect to impacts on Shenipsit Lake Reservoir and the Hockanum River include:

a. **Comment:** That Connecticut Water Company has not yet expanded the Rockville Water Treatment Plant to treat the water to be transferred to UCONN and Mansfield.

Finding: This is addressed in Section IV(B)(6)(g), above.

b. **Comment:** Concerns that water levels in Shenipsit Lake Reservoir will be lowered to the extent that the diversion will adversely affect aquatic resources, including the littoral zone and wetlands around the Lake.

Finding: This is addressed in Sections IV(B)(6)(a) and (c).

c. **Comment:** Questions about safeguards to protect the Lake and Hockanum River during periods of drought.

Finding: This is addressed in Sections IV(B)(6)(a), (b) and (c).

d. **Comment:** The potential for adverse effects on flows in the Hockanum River and on wetland habitats along the River.

Finding: This is addressed in Sections IV(B)(6)(b) and (c).

e. **Comment:** Concerns about the impacts of historic contamination on the Rockville Water Treatment Plant site.

Finding: No evidence was presented to demonstrate that there is any historic contamination remaining at the treatment plant site or in the area in which construction would occur. This concern was deemed not relevant to the diversion permit.

f. **Comment:** Whether the rate by which sources of water replenish Shenipsit Lake Reservoir are higher than the rate of the proposed use of Lake waters.

Finding: This is addressed in Section IV(B)(6)(a).

g. **Comment:** Concerns about the impact of UConn's use of water from Shenipsit Lake Reservoir on the growth of other communities.

Finding: This is addressed in Section IV(B)(12).

125. Several of the individuals opposing the proposed diversion questioned the fairness of the process for issuing the diversion permit or requested an independent evaluation of the project.

Finding: As addressed by Section II and IV, the process has followed all relevant laws, rules of practice and regulations for processing an individual diversion permit application.

126. Following the public hearing, a number of people and organizations filed written comments on the proposed permit. The written comments are included in the record. The written comments in opposition to the issuance of the permit were similar to those oral comments received during the public hearing session, and included:

a. **Comment:** Questions about the safe yield study done for Shenipsit Lake Reservoir, in particular, questioning the need for a safe yield study more current than the one done in 1995.

Finding: The Shenipsit Lake Reservoir safe yield analysis was completed and approved in 1995, using procedures and criteria established by the Department of Public Health and Addiction Services (now DPH) and the Department of Environmental Protection (now DEEP). Those procedures and criteria were subsequently codified in Sec. 25-32d-4 of the RCSA and have remained unchanged, obviating the need for a more current analysis.

b. **Comment:** Questions about whether the inflows to Shenipsit Lake Reservoir are sufficient to support a diversion of 1.8 million gallons per day.

Finding: This is addressed in Section IV(B)(6)(a).

c. **Comment:** Questions about why the alternative of having Windham Water Works supply UConn was not adopted.

Finding: This is addressed in Section IV(A) and in the EIE itself as well as in Section IV(B)(7). (Ex. App-1 Att. Q, EIE §§ 9, 12.)

d. **Comment:** Concerns about the potential impact of the diversion on private wells in the vicinity of Shenipsit Lake Reservoir.

Finding: This is addressed in Section IV(B)(6)(g).

e. **Comment:** Concerns that residents along the pipeline route will tap into the line taking even more water from the Lake.

Finding: This is addressed in Section IV(B)(12).

f. **Comment:** Concerns about increasing the drawdown of the Lake and the failure to consider increasing drought problems on the impact of the Lake.

Finding: This is addressed in Section IV(B)(6)(a).

g. **Comment:** Concerns about adverse impacts of the diversion on the use of the Lake for fishing, boating and recreational use.

Finding: This is addressed in Sections IV(B)(6)(a), (b) and (h); and IV(B)(9).

h. **Comment:** The need for an independent party to study the impact of the proposed diversion on Shenipsit Lake Reservoir to answer questions including, the amount of water that Shenipsit Lake Reservoir holds; the amount of water leaving Shenipsit Lake Reservoir in a week; how much more water will leave the lake if the diversion is approved; how much growth in demand is predicted for Vernon/Ellington/Manchester area; how much growth is predicted for UCONN/Mansfield area; how long does it take for the lake to recover from a deficit of one or two feet of water; at what level would

water cease to be drawn from the lake, and what limits are there on the amount of water that can be diverted; and at what point of low water level does Shenipsit Lake Reservoir become unsupportive of nature?

Finding: Potential impacts to the donor basin, including on Shenipsit Lake Reservoir, were substantively addressed in Section IV(B)(6).

i. **Comment:** Questions as to whether UConn actually needs the water proposed to be diverted.

Finding: This is addressed in Sections IV(A) and IV(B)(1).

127. During the comment period a resident of Tolland submitted a petition signed by more than 250 people asking that an independent entity create an environmental impact study of the proposed diversion of water from Shenipsit Lake Reservoir prior to approval of the diversion application.

Finding: DEEP's review is independent of the Applicants' and these issues have been studied over many years.

128. Several property owners, including Jensen's Communities in the Four Corner area, Norwegian Wood apartments in Tolland, and Masonicare wrote letters in support of the diversion, explaining their need for an adequate public water supply.

129. The Rivers Alliance of Connecticut, a statewide, non-profit coalition of river organizations and others formed to protect and enhance Connecticut's waters by promoting sound water policies, filed written comments supporting the issuance of the draft permit. In its written comments, the Rivers Alliance noted its involvement with the water issues in Mansfield since the late 1990s, the increased water conservation efforts made by UConn in recent years, and the consideration of alternative water supply solutions for UConn and Mansfield, which

began in earnest around 2008. The Rivers Alliance stated that the water resources on and near UConn's campus are inadequate; the Windham water alternative was not available and would have required considerable new infrastructure and energy consumption; and the MDC alternative was unacceptable to the Alliance. According to the Rivers Alliance, the proposed Connecticut Water Company diversion is the best alternative to address the water needs of UConn and Mansfield.

AGREEMENT

130. The undersigned hereby agree to the foregoing proposed Finding of Facts regarding the Revised Draft Permit.

THE CONNECTICUT WATER COMPANY

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Its Attorney

CERTIFICATION

I, Patricia L. Boye-Williams, hereby certify that a copy of the Applicants' Proposed Findings of Facts was sent this 14th day of May, 2015, via e-mail to the following persons:

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EXHIBIT A

SEE ATTACHMENT C

ATTACHMENT B
STATE OF CONNECTICUT
DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION
OFFICE OF ADJUDICATIONS

IN THE MATTER OF	:	APPLICATION NO. DIV-201404187
THE CONNECTICUT WATER COMPANY	:	
and	:	
UNIVERSITY OF CONNECTICUT, Applicants	:	May 14, 2015

APPLICANTS' PROPOSED CONCLUSIONS OF LAW

INTRODUCTION

Pursuant to the Hearing Officer's Post-Hearing Directive, the University of Connecticut ("UConn" or the "University") and the Connecticut Water Company ("CWC") (collectively, the "Applicants") respectfully submit this Proposed Conclusions of Law regarding the above-captioned application matter. The Revised Draft Permit, DIV-2011404187* (attached hereto as Exhibit A) (Ex. DEEP-21.), to divert waters of the state pursuant to Conn. Gen. Stat. § 22a-368, submitted by the DEEP Staff is acceptable to the Applicants. (*Typo. correction: 2014404187)

PROPOSED CONCLUSIONS OF LAW

I. THE APPLICATION

1. Section 22a-369 of the General Statutes requires that an application for a diversion permit include information the Commissioner has deemed necessary to fulfill the purposes of the Connecticut Water Diversion Policy Act. Conn. Gen. Stat. §§ 22a-365 *et seq.* ("Diversion Act"). This information includes the following: 1) the need for the diversion; 2) the reasons for the diversion and the use of the diverted water; 3) a description of the existing water system where the diversion is proposed; 4) the locations of the withdrawals and discharges of

water the Applicants propose to divert; 5) the quantity, frequency and rate of water the Applicants propose to divert; 6) the length of time for which the diversion permit is sought; 7) the effect of the proposed diversion on public water supplies, water quality, waste water treatment needs and waste assimilation, flood management, water-based recreation, wetland habitats, agriculture, fish and wildlife, and low flow requirements; 8) the alternatives to the proposed diversion, including a study of cost factors, feasibility and environmental effects of the alternatives; 9) conservation measures instituted by the Applicants prior to the application and the Applicants' long-range water conservation plan, including factors outlined in the Diversion Act; and 10) because this diversion would be an interbasin transfer, an Environmental Impact Report.[1]

2. The Applicants submitted their application on the appropriate forms prescribed by the Commissioner, DEEP-IWRD-APP-100. The Applicants also filed additional information requested by DEEP staff and thereupon DEEP determined the application to be complete, as required by Conn. Gen. Stat. § 22a-371. (Ex. DEEP-3).[2] Based on the record, the Application contains the material required pursuant to applicable law.

3. The Applicants presented sufficient evidence to support the information required by the Diversion Act. The application therefore complies with Conn. Gen. Stat. § 22a-369.

II. PROCEDURAL REQUIREMENTS

4. Based on the record, and as addressed in the Findings of Fact, the procedural requirements of Conn. Gen. Stat. §§ 22a-371 and 22a-372 have been fulfilled.

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[1] Conn. Gen. Stat. § 22a-369 provides that the Commissioner may request an environmental impact report ("EIR") in the case of an interbasin transfer; the Applicants filed an EIR as part of the application prior to receiving any such request.

[2] The application form and attachments, and additional information requested by DEEP (App-2) are collectively referred to as the "Application".

III. STATUTORY AND REGULATORY STANDARDS FOR PERMIT ISSUANCE

5. In deciding whether to issue a diversion permit, the Commissioner must consider all relevant facts and circumstances that include, but are not limited to, those listed in Conn. Gen. Stat. §§ 22a-373 as well as those set forth in R.C.S.A. § 22a-377(c)-2(f) . There is substantial evidence to support the issuance of this diversion permit, based on considerations of each of the substantive issues outlined below.

A. Water Diversion Policy Act

1. The proposed diversion will have no unacceptable adverse impact on related needs for public water supply including existing and projected uses, safe yield of reservoir systems and reservoir and groundwater development. C.G.S. § 22a-373(b)(1); R.C.S.A. §§ 22a-377(c)-2, (d)(1) and (2)

6. The Applicants have fully evaluated the effect of the proposed diversion on all flow dependent resources needs within the donor basin. That evaluation shows that the proposed diversion will have no unacceptable adverse impact on flow dependent water resource needs.

7. The Applicants' analysis of the diversion's impact on the drawdown of Shenipsit Reservoir under hypothetical worst case conditions showed that the diversion would result in a drawdown of two to three feet under conditions where no water is added to the Shenipsit Reservoir over the course of one year. An analysis of potential impact during a moderately dry year like 2005 showed the diversion would have caused an additional drawdown of 0.7 feet in June and 0.8 feet in August. Given the volume of the Shenipsit Reservoir and the safe yield of 9.8 million gallons per day ("mgd"), the drawdown anticipated by this diversion would not impact the CWC's ability to continue to supply water to its existing customers or its ability to meet projected future demand.

8. Additionally, the diversion will have no adverse impact on the yields of private wells in the area of Shenipsit Reservoir or elsewhere. The maximum two to three foot draw

down would not significantly impact the bedrock wells in the area because, to the extent that the Reservoir is fed by groundwater, the bedrock wells typically receive (intercept) the groundwater before the Reservoir does. However, even if the bedrock wells are impacted, such impacts would be negligible given the depth of the wells and their storage capacity in comparison to the amount of draw down (two to three feet). There are no shallow dug wells in the vicinity of Shenipsit Reservoir that would be impacted by this diversion.

2. The diversion would have no unacceptable adverse impact on existing and planned water uses in the area affected such as public water supplies, relative density of private wells, hydropower, flood management, water-based recreation, wetland habitats, waste assimilation and agriculture. There would be no adverse impacts, including thermal effects, on fish and wildlife as a result of flow reduction, alteration or augmentation from the diversion. C.G.S. §§ 22a-373(b)(2), (b)(6) and (b)(7); § 26-310, R.C.S.A. § 22a-377(c)-2(d)(3), (f)(2) and (3).

9. No public water supplies will be adversely impacted by the proposed diversion given the volume of Shenipsit Reservoir and the safe yield determinations approved by the Department of Public Health. CWC streamflow releases will continue to be made under the Revised Draft Permit such that downstream public or private drinking water wells will not be adversely affected.

10. The volume of water that will be discharged to the Willimantic River is insignificant given the volume of water that flows through the Willimantic River already; accordingly, there will be no impact to flooding along the Willimantic.

11. Any lowering of surface water elevations in the Shenipsit Reservoir would be temporary and would not impact fisheries resources in the Shenipsit Reservoir given the volume of water in the Reservoir and the recharge that occurs as a result of rainfall and runoff in the watershed.

12. Additionally, the Revised Draft Permit condition requiring stream flow releases from Shenipsit Reservoir will result in stream flows that more naturally mimic the seasonal variation of stream flow for the Hockanum River, and these streamflow protection releases required by the permit will occur sooner than otherwise required by recently established regulations. These releases will support fish and other wildlife that rely on the Hockanum River. Similarly, wetlands along the Hockanum River will benefit from these streamflow releases. Accordingly, the proposed diversion will not cause an adverse impact on the Hockanum River itself or on the flora and fauna in the vicinity of the Hockanum River.

13. There are no endangered species in the area of the proposed diversion including the regional pipeline route. The Revised Draft Permit provides special conditions to mitigate potential adverse impacts to documented species of special concern (wood turtle and southern bog lemming) populations in the vicinity of the project. These conditions ensure that protected species will not be adversely impacted by the proposed diversion.

14. There will be no unacceptable, long-term adverse impact on wetland vegetation or wetland functions in the area of the Shenipsit Reservoir or the regional pipeline that will be constructed. The few wetlands in the vicinity of the Shenipsit Reservoir are already accustomed to the seasonal rise and fall of the water levels and accordingly, any additional drawdown will not cause permanent harm to the wetland habitat.

15. The regional pipeline itself will not be constructed within any wetland areas and the Applicants' use of construction best practices will ensure that the construction activities do not impact nearby wetlands.

16. The capacity for waste assimilation in the Willimantic River will not be adversely affected by discharges related to the diversion as a result, in part, of the fact that the wastewater

discharge from UConn's Water Pollution Control Facility will remain below its average daily flow capacity and impacts approved under the discharge permit for that facility.

17. Boating, fishing, and other water-based recreation will not be adversely impacted by the diversion, including under the worst-case predictions regarding the possible extent of water level reductions in the Shenipsit Reservoir or flows in the Hockanum River. Because the diversion would not adversely affect fisheries habitats, fishing in the area would not be impacted by the proposed diversion.

18. Agriculture will not be adversely impacted by the proposed diversion.

3. The proposed diversion is compatible with the policies and programs of the state of Connecticut dealing with long-range planning, management, allocation and use of water resources. C.G.S. § 22a-373(b)(3); R.C.S.A. § 22a-377(c)-2(f)(5)

19. The proposed project is consistent with the relevant policies of the State Plan of Conservation and Development. The Applicants propose to provide a high quality water supply to an area in need of a new water source. The proposed diversion will promote sustainable development for UConn and the surrounding area by providing a clean source of water. The Revised Draft Permit contains special conditions to ensure that any future development associated with the regional pipeline is completed in accordance with the State Plan of Conservation and Development and local planning and zoning management requirements.

20. The Connecticut Office of Policy and Management determined that UConn performed an evaluation of the diversion project that satisfied the requirements of the Connecticut Environmental Policy Act ("CEPA"), C.G.S. §§22a-1 *et seq*.

21. The diversion project calls for the expansion of public water interconnections based on the demonstrated need to maintain public health-derived water supply margin of safety standards and address the projected water supply needs of the Town of Mansfield and UConn.

4. The proposed diversion would have a positive impact on economic development and the creation of jobs C.G.S. § 22a-373(b)(4); R.C.S.A. § 22a-377(c)-2(d)(2)

22. Current and projected growth at UConn and in the Mansfield area requires the Applicants to (1) supplement UConn's water supplies to continue to serve the UConn community and (2) provide a clean, reliable source of potable water to the Town of Mansfield. Adequate water supplies and the confidence that future supplies will be available would enhance economic development in the area, while permit conditions ensure that this development is appropriate and in line with Town planning and zoning requirements. In particular, the Mansfield Four Corners area does not currently have a public source of potable water and as a result, this area remains underdeveloped. In part, the proposed diversion will provide a water supply to address the Mansfield Four Corner area needs.

23. Additionally, this requested diversion will facilitate the development of the NextGenCT and Technology Park initiatives. The state legislature declared that these initiatives promote the welfare and prosperity of the people of the state. The proposed diversion will have positive social and economic impacts, and failure to secure the requested diversion permit could result in reduced commercial and economic development within the Town of Mansfield.

5. The proposed diversion would have no unacceptable adverse impacts on existing water conditions, including watershed characterization, groundwater availability potential, evapotranspiration conditions and water quality § 22a-373(b)(5); § 22a-377(c)-2(d)(3) and (f)(1)

24. Total flow in the Hockanum River will not be significantly reduced despite the proposed diversion. In particular, the streamflow release requirements in the Revised Draft Permit ensure that the Hockanum will continue to receive cold water releases from the Shenipsit Reservoir. In fact, the Revised Draft Permit condition requires the Applicants to comply with new streamflow regulations earlier than they would otherwise be required to comply with those

new regulations. The Hockanum River will benefit from this condition in the Revised Draft Permit.

25. The water levels in the Shenipsit Reservoir could experience up to three feet drawdown in a worst-case scenario where the reservoir fails to receive any naturally-occurring recharge over the course of a full year. However, even a drawdown of this magnitude ultimately would be replenished by later rainfall in the watershed and the Shenipsit Reservoir is already accustomed to seasonal drawdown of lake levels in drier weather.

26. The diversion would not affect the amount of groundwater available for private water wells in the area nor would the proposed diversion cause or contribute to water quality issues for private wells in the area.

27. The diversion would not affect the water quality classification of the Shenipsit Reservoir, the Hockanum River or any receiving basin waters. Further, water quality for users relying on Shenipsit Reservoir and those relying on groundwater would remain the same as it currently exists.

6. The proposed diversion would have no effect on navigation § 22a-373(b)(7)

28. The diversion will have no effect on navigation.

7. The water to be diverted is necessary and the diversion proposed by the Applicants was the most prudent and feasible alternative selected of those reviewed, including conservation. C.G.S. § 22a-373(b)(8), R.C.S.A. § 22a-377(c)-2(d)(4)

29. Present and predicted water demands indicate that there is a documented need for an additional source of water to supplement the University's and the Town of Mansfield's current water supply options. Based on the growth of the University (including NextGenCT and the Technology Park) and the lack of a sufficient source of water for the Mansfield Four Corners

and other areas near the University, the current water supply does not meet the University's or Town's needs.

30. The proposed diversion is the most viable alternative to provide potable water to the University and the Town for the relevant water supply planning period and the foreseeable future. The Applicants evaluated six water supply source alternatives, as well as having considered the University's current conservation program. UConn and CWC considered the feasibility, financial costs and potential environmental impact of each alternative. The requested diversion is the most feasible and prudent with respect to environmental effects and economic viability. While several residents in the vicinity of the proposed diversion voiced concerns regarding the selection of the CWC alternative over other alternatives (such as the Windham Water Works alternative), the CWC alternative is more feasible, had the lowest costs, and adequately mitigates environmental concerns.

31. Taking into consideration and giving due regard to the Alternatives Assessment proffered by the Applicants; the ongoing need for water at the University, including the projected need for water associated with the NextGenCT and Technology Park projects; and the proposed redevelopment of the Mansfield Four Corners area, the diversion is necessary and the CWC alternative is the most feasible and prudent alternative.

8. The diversion is not inconsistent with any action taken by the Attorney General pursuant to §§ 3-126 and 3-127 and there is no evidence that it would be in substantial conflict with the interests of any municipalities affected by the diversion nor is the diversion within a coastal area C.G.S. § 22a-373(b)(9), (10), R.C.S.A. § 22a-377(c)-2(f)(4)

32. The diversion will not have any effect on interstate waters; therefore the provisions of §§ 3-126 and 127 are not relevant to the Applicants' proposed diversion. Additionally, the diversion is not located within and will not affect the coastal area.

33. The Town of Mansfield benefits from the proposed diversion and has expressed no objection to the proposed diversion permit. Likewise, the project is consistent with the interests of the Towns of Mansfield, Ellington, Vernon and the Tolland. Furthermore, the Revised Draft Permit takes into account local planning and zoning considerations such that all future connections to the proposed regional pipeline must receive appropriate approvals before they can be implemented.

B. Factors to be Considered by the Commissioner Under R.C.S.A. § 22a-377(c)-2(f)

In light of the Findings of Fact and the foregoing conclusions of law, the following findings are made:

34. The proposed diversion is consistent with the standards, criteria, policies, and water quality classifications for ground and surface water adopted and amended under Conn. Gen. Stat. § 22a-426.

35. The proposed diversion is consistent with policies and requirements of Chapter 440 of the Connecticut General Statutes and the regulations promulgated thereunder.

36. The proposed diversion is designed and will be carried out so as to minimize and eliminate flooding and flood hazards, and to be consistent with the policies and requirements of Chapter 476a of the Connecticut General Statutes and the regulations promulgated thereunder.

37. The proposed diversion is consistent with the relevant policies of the State Plan of Conservation and Development adopted under Connecticut General Statutes § 16a-24 through 16a-32.

38. The proposed diversion is not within and will not affect the coastal area and accordingly, R.C.S.A. § 22a-377(c)-2(f)(4) does not apply.

IV. THE DRAFT PERMIT

39. The Commissioner issued a Notice of Tentative Determination to approve the Application for Diversion of Water Permit including a draft permit authorizing the Applicants to divert waters of the state pursuant to Conn. Gen. Stat. § 22a-368. The Revised Draft Permit specifically permits the Applicants "to conduct regulated activities associated with the interconnection and transfer of water from the Connecticut Water Company public water system in Tolland to the University of Connecticut and Mansfield. The purpose of said activities is to provide supplemental public water supplies to the University of Connecticut and the Town of Mansfield." (Ex. DEEP-21.)

40. By virtue of the Revised Draft Permit, the Applicant would be authorized to transfer a maximum of 1.85 million gallons per day of water from the CWC's Northern Western System to the University's public water system and the Town of Mansfield. The water will be transferred through a proposed 5.3 mile pipeline along Route 195. Additionally, the Applicants would be permitted to install a 0.5 mile water distribution main from the regional pipeline to Jensen's community along Route 44. This activity will be conducted in accordance with the Application and the Revised Draft Permit.

V. PERMIT AND PERMIT CONDITIONS

41. The Revised Draft Permit meets all the statutory requirements and contains provisions that are sufficiently protective of the environment. The Applicants have not objected to any of the Revised Draft Permit's terms and conditions. Accordingly, issuance of the diversion permit, is recommended in its current form and wording (attached hereto as Exhibit A) except as may be needed to correct typographical errors, if any exist.

42. The Applicants provided comments to DEEP Staff regarding the initial draft of the permit. As a result of those comments, DEEP Staff revised the Draft Permit to address the Applicants' comments. (attached hereto as Exhibit A).

VI. CONCLUSION AND RECOMMENDATION

43. The Applicants have demonstrated by a preponderance of the evidence presented that their Application and the Revised Draft Permit comply with all applicable statutory and regulatory requirements. Accordingly, the Revised Draft Permit attached hereto as Exhibit A, should be issued as a final permit.

THE CONNECTICUT WATER COMPANY

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Its Attorney

CERTIFICATION

I, Patricia L. Boye-Williams, hereby certify that a copy of the Applicants' Proposed Conclusions of Law was sent this 14th day of May, 2015, via e-mail to the following persons:

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EXHIBIT A

SEE ATTACHMENT C

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employer

ATTACHMENT C
PERMIT (REVISED DRAFT)

Permittees: The Connecticut Water Company
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The University of Connecticut
31 LeDoyt Road, Unit 3055, Storrs, CT 06269-3055
Attn: Jason Coite

Permit No: DIV-201404187

Town: Ellington, Vernon, Tolland, Coventry, Mansfield

Project: Interconnection and diversion of water from the Connecticut Water Company public water system in Tolland to the University of Connecticut and the Town of Mansfield

Waters: Shenipsit Lake, Hockanum River, Willimantic River

Pursuant to Connecticut General Statutes Section 22a-368, the Commissioner of Energy and Environmental Protection ("Commissioner") hereby grants a permit to The Connecticut Water Company and The University of Connecticut ("the Permittees") to conduct regulated activities associated with the interconnection and transfer of water from the Connecticut Water Company public water system in Tolland to the University of Connecticut and Mansfield. The purpose of said activities is to provide supplemental public water supplies to the University of Connecticut and the Town of Mansfield.

AUTHORIZED ACTIVITY

Specifically, the permittees are authorized to: 1) transfer a maximum of 1.85 million gallons per day of potable water from The Company's Northern Operations Western System to Mansfield and the University of Connecticut's public water system Connecticut Water via a proposed regional 5.3 mile pipeline along Route 195, and 2) installation of a 0.5 mile water distribution main emanating from the aforementioned regional pipeline westerly along Route 44 from Mansfield Four Corners to the vicinity of the Jensen's Mobile Home Park. The location of the regional pipeline and the water distribution main authorized by this permit are referred to as "the Site".

The activities proposed will impact Shenipsit Lake (Lake), Hockanum River, and the Willimantic River.

All activities shall be conducted in accordance with plans entitled: "Water Systems and Proposed

Improvements / Tolland-Mansfield Regional Pipeline and Interconnection / Tolland, Coventry & Mansfield, CT," prepared by Milone & MacBroom, dated 12/6/2013, revised through 4/7/2014, submitted as a part of the application.

This authorization constitutes the licenses and approvals required by Section 22a-368 of the Connecticut General Statutes.

This authorization is subject to and does not derogate any present or future property rights or other rights or powers of the State of Connecticut, conveys no property rights in real estate or material nor any exclusive privileges, and is further subject to any and all public and private rights and to any federal, state, or local laws or regulations pertinent to the property or activity affected thereby.

The permittees' failure to comply with the terms and conditions of this permit shall subject the permittees, including the permittees' agents or contractor(s) to enforcement actions and penalties as provided by law.

This authorization is subject to the following conditions:

CONDITIONS:

1. **Expiration.** This permit shall expire on [25 years].

2. **Construction Commencement and Completion.** If construction of any structures or facilities authorized herein is not completed within three years of issuance of this permit or within such other time as may be provided by this permit, or if any activity authorized herein is not commenced within three years of issuance of this permit or within such other time as may be provided by this permit, this permit shall expire three years after issuance or at the end of such time as may be authorized by the Commissioner.

3. **Notification of Project Initiation.** The permittees shall notify the Commissioner in writing two weeks prior to: (A) commencing construction or modification of structures or facilities authorized herein; and (B) initiating the diversion authorized herein.

4. **De minimis Alteration**. For Water Diversion Permits (CGS 22a-368) - The permittees may not make any alterations, except de minimis alterations, to any structure, facility, or activity authorized by this permit unless the permittees apply for and receives a modification of this permit in accordance with the provisions of section 22a-377(c)-2 of the Regulations of Connecticut State Agencies. Except as authorized by subdivision (5) of section 22a-377(b)-1(a) of the Regulations of Connecticut State Agencies, the permittee may not make any de minimis alterations to any structure, facility, or activity authorized by this permit without written permission from the Commissioner. A de minimis alteration means an alteration which does not significantly increase the quantity of water diverted or significantly change the capacity to divert water.

5. **Maintenance of Structures.** All structures, facilities, or activities constructed, maintained, or conducted pursuant hereto shall be consistent with the terms and conditions of this permit, and any structure, facility or activity not specifically authorized by this permit, or exempted pursuant to section 22a-377 of the General Statutes or section 22a-377(b)-1 of the Regulations of Connecticut State Agencies, or otherwise exempt pursuant to other General Statutes, shall constitute a violation hereof which may result in modification, revocation or suspension of this permit or in the institution of other legal proceedings to enforce its terms and conditions.

   Unless the permittees maintain in optimal condition any structures or facilities authorized by this permit, the permittees shall remove such structures and facilities and restore the affected waters to their condition prior to construction of such structures or facilities.

6. **Accuracy of Documentation.** In issuing this permit, the Commissioner has relied on information provided by the permittees. If such information was false, incomplete, or misleading, this permit may be modified, suspended or revoked and the permittees may be subject to any other remedies or penalties provided by law.

7. **Best Management Practices & Notification of Adverse Impact**. In constructing or maintaining any structure or facility or conducting any activity authorized herein, or in removing any such structure or facility under condition 5 hereof, the permittees shall employ best management practices to control storm water discharges, to prevent erosion and sedimentation, and to otherwise prevent pollution of wetlands and other waters of the State. Best Management Practices include, but are not limited, to practices identified in the *Connecticut Guidelines for Soil Erosion and Sediment Control* as revised, *2004 Connecticut Stormwater Quality Manual*, Department of Transportation's *ConnDOT Drainage Manual* as revised, and the Department of Transportation Standard Specifications as revised.

   The permittees shall immediately inform the Commissioner of any adverse impact or hazard to the environment which occurs or is likely to occur as the direct result of the construction, maintenance, or conduct of structures, facilities, or activities authorized herein.

8. **Reporting of Violations.** The permittees shall, no later than 48 hours after the permittees learn of a violation of this permit, report same in writing to the Commissioner. Such report shall contain the following information:

   a. the provision(s) of this permit that has been violated;
   b. the date and time the violation(s) was first observed and by whom;
   c. the cause of the violation(s), if known

d. if the violation(s) has ceased, the duration of the violation(s) and the exact date(s) and times(s) it was corrected;
e. if the violation(s) has not ceased, the anticipated date when it will be corrected;
f. steps taken and steps planned to prevent a reoccurrence of the violation(s) and the date(s) such steps were implemented or will be implemented;
g. the signatures of the permittee(s) and of the individual(s) responsible for actually preparing such report, each of whom shall certify said report in accordance with condition 12 of this permit.

9. **Material Storage in the Floodplain.** The storage of any materials at the site which are buoyant, hazardous, flammable, explosive, soluble, expansive, radioactive, or which could in the event of a flood be injurious to human, animal or plant life, below the elevation of the five-hundred (500) year flood is prohibited. Any other material or equipment stored at the site below said elevation by the permittees or the permittees' contractor must be firmly anchored, restrained or enclosed to prevent flotation. The quantity of fuel stored below such elevation for equipment used at the site shall not exceed the quantity of fuel that is expected to be used by such equipment in one day.

10. **Permit Transfer.** This permit is not transferable without the prior written consent of the Commissioner.

11. **Contractor Notification**. The permittees shall give a copy of this permit to the contractor(s) who will be carrying out the activities authorized herein prior to the start of construction and shall receive a written receipt for such copy, signed and dated by such contractor(s). The permittees' contractor(s) shall conduct all operations at the Site in full compliance with this permit and, to the extent provided by law, may be held liable for any violation of the terms and conditions of this permit.

12. **Certification of Documents**. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this permit shall be signed by the permittees or a responsible corporate officer of the permittees, a general partner of the permittees, and by the individual or individuals responsible for actually preparing such document, each of whom shall certify in writing as follows:

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto and I certify that based on reasonable investigation, including my inquiry of the individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement in the submitted information may be punishable as a criminal offense in accordance with Section 22a-6 of the General Statutes, pursuant to Section 53a-157b and in accordance with any other applicable statute."

13. **Submission of Documents**. Any document or notice required to be submitted to the Commissioner under this permit shall, unless otherwise specified in writing by the Commissioner, be directed to:

    Director, Inland Water Resources Division
    Department of Energy and Environmental Protection
    79 Elm Street
    Hartford, CT 06106-5127

    The date of submission to the Commissioner of any document required by this permit shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this permit, including but not limited to notice of approval or disapproval on any document or other action, shall be the date such notice is personally delivered or the date three days after it is mailed by the Commissioner, whichever is earlier. Except as otherwise specified in this permit, the word "day" means any calendar day. Any document or action which is required by this permit to be submitted or performed by a date which falls on a Saturday, Sunday or legal holiday shall be submitted or performed by the next business day thereafter.

14. **Rights.** This permit is subject to and does not derogate any rights or powers of the State of Connecticut, conveys no property rights or exclusive privileges, and is subject to all public and private rights and to all applicable federal, state, and local law. In constructing or maintaining any structure or facility or conducting any activity authorized herein, the permittees may not cause pollution, impairment, or destruction of the air, water, or other natural resources of this State. The issuance of this permit shall not create any presumption that this permit should be renewed.

15. **Shenipsit Lake Stream Flow Release.**
    a. In order to mitigate potential fisheries impact resulting from the authorized diversion, the permittees shall maintain the current stream flow release of 3.24 cubic feet per second (cfs), with the current spring freshet release as defined in Table L-1 in Attachment L of their application dated April 23, 2014. Such stream flow releases shall be made from the Shenipsit Lake to the Hockanum River immediately downstream of the lake, and
    b. Within ten (10) years of the issuance of this permit, the permittees shall make stream flow releases from the Shenipsit Lake fully coincident with Class 3 releases as defined in section 26-141b-6(a)(3) and 26-141b-6(b) of the Regulations of Connecticut State Agencies (RCSA).
    c. The permittees may request from the commissioner an extension of time to comply with the releases as defined in section 26-141b-6(a)(3) RCSA. Any such request for a time extension shall be submitted in writing to the commissioner and shall include reasons for such a request, including but not limited to, engineering,

financial, permitting, or public health considerations. The commissioner shall have sole discretion to approve or deny such request.

d. The permittees may request an alternative site specific release compatible with the standards of section 26-141b-6(f)(2) of the RCSA.
e. In accordance with commitments made by the permittees in the application, the permittees shall not reduce managed stream flow releases from Shenipsit Lake due to an inadequate water supply margin of safety for the duration of this permit.

16. **Stream Discharge Record Keeping and Reporting.** The permittees shall monitor and record the daily discharge to the Hockanum River immediately downstream of the Shenipsit Lake. The permittees shall record the stage reading, the gate opening, the date and time of the reading and the converted flow value at the time of measurement. The permittees shall also record the number of hours elapsed since their discharge to the Hockanum River has fallen below the specified trigger thresholds as required in Condition #15. A copy of the daily discharge records shall be included in the Annual Report to the Commissioner required by Condition #23 of this permit.

17. **Metering**. The permittees shall measure the total amount of water transferred each day from The Connecticut Water Company water supply system to the Town of Mansfield and the University of Connecticut at the intersection of Route 195 and Towers Loop Road in Mansfield and shall for the duration of this authorization continuously operate and maintain any meters used in such measuring in good working order. In the event of meter malfunction or breakage, the permittees shall repair or replace such meter within 72 hours. The permittees shall submit for the Commissioner's approval a metering plan no later than 60 days prior to the initiation of the diversion.

18. **Meter Calibration**. The permittees shall biennially test and calibrate any distribution meter used for measuring the total amount of water transferred each day within two percent accuracy as shown through a post-calibration test. The permittees shall maintain a record of the accuracy and calibration test(s) along with supporting documentation and certifications. The permittees shall make a copy of said records available to the Commissioner or the Commissioner's designee immediately upon request.

19. **Daily Transfer Record**. The permittees shall maintain a daily record of the meter readings indicating the total volume of water in gallons transferred from The Connecticut Water Company water system to the Town of Mansfield and the University of Connecticut water supply system that day. The daily record shall also record the time of meter readings and denote and explain any instances in which the diversion of water exceeded the authorized withdrawal limitation(s) specified in this permit. A copy of the daily record of withdrawals shall be included in the Annual Report to the Commissioner required by Condition #23 of this permit.

20. **Leak Detection**. Within five years of the issuance of this permit, and every five years thereafter, the permittees shall complete a system wide comprehensive leak detection survey of the water distribution system and repair any leaks found. The leak detection survey shall follow standards and criteria contained within AWWA Manual M36 as may be amended or revised. A copy of all actions taken pursuant to the leak detection survey, including the number of miles of main surveyed, survey techniques and methodology, leaks found and repairs made shall be included in the Annual Report to the Commissioner required by Condition #23 of this permit.

21. **Long-range Water Conservation Plan**. The permittees shall implement their Long-range Water Conservation Plans, as described in the permittees' application, and in accordance with the permittees' Water Supply Plan as approved pursuant to CGS Section 25-32d and any amendments or updates thereto. The permittees shall maintain a summary of all actions taken each year pursuant to the Long-range Water Conservation Plan and a description of the estimated or actual water savings achieved. A copy of this summary shall be included in the Annual Report to the Commissioner required by Condition #23 of this permit.

22. **Record Keeping Requirements**. Except as provided below, or as otherwise specified in writing by the commissioner, all information required under this permit shall be retained at the permittees' principal place of business, or be readily available on request. The permittees shall maintain a copy of this permit on Site at all times during the construction of the pipeline. The permittees shall retain copies of all records and reports required by this permit; and records of all data used to compile these reports for a period of at least ten years from the date such data was generated or report created, whichever is later.

23. **Annual Reporting**. The permittees shall submit by February 28 of each year, for the duration of this authorization, an Annual Report for the preceding calendar year. The Annual Report shall be certified in accordance with Condition #12 of this permit and shall contain a compilation of the following:
    a. A copy of the daily record of stream discharge as required by Condition #16 of this permit;
    b. A copy of the records documenting the daily transfer of water from The Connecticut Water Company water system to The University of Connecticut water supply system as required by Condition #29 of this permit;
    c. A copy of the leak detection report as required by Condition #20 of this permit;
    d. A summary report from each permittee of all the actions taken pursuant to the Long-Range Water Conservation Plan and Water Conservation Plan and description of actual or estimated water savings achieved, as required by Condition #21 of this permit;
    e. A copy of the list of the number and types of customers connected to the regional pipeline during the prior year as required by Condition #26; and

f. Denotation and explanation of any instances of violation of the authorized withdrawal limitation(s) or any other condition of this authorization.

24. **Wood Turtle Conservation**. To limit the potential for impacts to Wood Turtles (a Connecticut species of special concern) at locations as indicated on Figure 4-3 of Attachment D-4 of the permittees' application, project construction activities should be restricted to the turtles' dormant period of November 1 to April 1 at said locations. If work must be done during the turtle's active period of April 1 to November 1 at said locations, the permittee shall adhere to the following precautionary measures:

- silt fencing shall be installed around the appropriate work area prior to construction,
- work crews shall be apprised of the species description and possible presence prior to construction,
- work crews shall search the work area for wood turtles each day prior to construction,
- any wood turtles encountered during the work shall be moved unharmed to an area immediately outside of the fenced work area and oriented in the same direction it was walking when found,
- all precautionary measures should be taken to avoid degradation to wetland habitats including any wet meadows and seasonal pools,
- work conducted in these habitats during the early morning and evening hours should occur with special care not to harm basking or foraging individuals,
- no heavy machinery or vehicles shall be parked in any turtle habitat and precautions shall be taken when the machinery is traveling to the work area to avoid turtles,
- work conducted during the early morning and evening hours shall occur with special care not to harm basking or foraging individuals, and
- all silt fencing shall be removed after work is completed when soils are stable so that reptile and amphibian movement between uplands and wetlands is not restricted.

Refer to the attached fact sheet for species and habitat description.

25. **Southern Bog Lemming Conservation.** Work crews shall be apprised of the species description, habitat and possible presence of the Southern Bog Lemming, at locations as indicated on Figure 4-3 of Attachment D-4 of the permittees' application, prior to construction. Refer to the attached fact sheet for species and habitat description.

26. **New Service Connections.** New service connections along the distribution pipeline route from Tolland, or more intensive use of an existing service connection along said route, from water supplied pursuant to this permit shall be limited to only those proposed land uses of an intensity allowed under local plans of conservation and development as of the

date of the Connecticut Office of Policy and Managements' notice of Environmental Impact Evaluation sufficiency (September 16, 2013). Connections for users of greater intensity will be allowed only if determination is made by State or local agencies, within their applicable authorities, including but not limited to the Public Utility Regulatory Authority pursuant to Section 16-10 Connecticut General Statutes, that such connection is necessary to address a demonstrated environmental, public health, public safety, economic, social, or general welfare concern. The permittees shall provide in the annual report as, required by Condition #23 of this permit, a list of the number and types of customers connected to the pipeline during the prior year.

Issued by the Commissioner of Energy and Environmental Protection on:

_____
Date

_____
Robert Klee
Commissioner