

**BRUNSWICK TOWN COUNCIL**

**Agenda**

**February 3, 2014**

**Morrell Meeting Room**

**Curtis Memorial Library**

**23 Pleasant Street**

Pledge of Allegiance

Roll Call

Public Comment:

Correspondence:

Council Committee Updates

Adjustments to the Agenda:

**MANAGER'S REPORT:**

- a) Update from People Plus
- b) Report from Brunswick Public Art
- c) Introduction of Linda Smith, Business Development Manager
- d) Update on the Kate Furbish Dam Removal grant
- e) Update on Town Hall project

**PUBLIC HEARING**

- 10. The Town Council will hear public comments on Zoning Ordinance amendments relative to the Village Review Board membership, and will take any appropriate action.  
(Manager)

**PUBLIC HEARING/ACTION**

**NEW BUSINESS**

- 11. The Town Council will hear a report from the Chair of the Recreation Commission regarding the results of a citizen survey to help establish priorities for future development of outdoor aquatic facilities within the community, and take any appropriate action.  
(Manager)

**ACTION**

- 12. The Town Council will consider supporting a letter of intent for a CDBG grant for MRRA to assist with the "Make It In America" grant they recently received, and will take any appropriate action. (Manager)

**ACTION**

13. The Town Council will consider applying for a Land for Maine's Future Grant to address public access needs in upper Woodward Cove, and will take any appropriate action. (Councilor Walker) **ACTION**
14. The Town Council Chair will make an appointment to the Restoration Advisory Board, and will take any appropriate action. (Chair Pols) **ACTION**
15. The Town Council will discuss the method to select a firm to conduct the Town Manager search, and will take any appropriate action. (Chair Pols and Councilor Brayman) **ACTION**

**CONSENT AGENDA**

- a) Approval of the Minutes of January 21, 2014
- b) Approval of the Minutes of December 23, 2013

**INDIVIDUALS NEEDING AUXILIARY AIDS FOR EFFECTIVE  
COMMUNICATION SHOULD CONTACT  
THE TOWN MANAGER'S OFFICE AT 725-6659 (TDD 725-5521)**

**Brunswick Town Council  
Agenda  
February 3, 2014  
Council Notes and Suggested Motions**

**COUNCIL COMMITTEE UPDATES**

Council Committee updates will be done after correspondence. Councilors with information on the Committees they are involved with will share information with the Council and public.

**MANAGER'S REPORT:**

- a) Update from People Plus: Stacy Frizzle, Executive Director, will briefly update the Council on activities of People Plus. Frank Connors will also present Councilors with a copy of his book, "Frankly Speaking," which is a compilation of his columns from the People Plus Newsletter.

*Suggested motion:* No action is required.

- b) Report from Brunswick Public Art: Susan Weems and Rob Jarrett, representing this group, will update the Council and the public on their fund raising efforts and current public art projects in the community. Copies of supporting materials are included in your packet.

*Suggested motion:* No action is required.

- c) Introduction of Linda Smith, Business Development Manager: This item is to introduce Ms. Smith to the Council and the public.

*Suggested motion:* No action is required.

- d) Update on the Kate Furbish Dam Removal grant: Previously, the Council approved working with Maine Coast Heritage Trust (MCHT) on the Kate Furbish restoration project and applying to the Maine Natural Resources Conservation Program (MNRCP) for funding. That funding in the amount of \$136,000 was approved at the January 15, 2014, MNRCP board meeting. The funds will be used to address the failed impoundment, erosion, and invasive species in the southwestern portion of the Preserve. As MCHT was the lead applicant, the funds will be going to MCHT, and they will be coordinating project permitting, contracting, and construction oversight for the town, in close consultation with Town staff. Dan Devereaux will provide this update to the Council and public. Copies of a memo from Officer Devereaux and photos of the area are included in your packet.

*Suggested motion:* No action is required.

- e) Update on Town Hall project: This item will be an update on the progress of the new Town Hall. Copies of a memo from Manager Brown and budget information are included in your packet.

Suggested motion: No action is required.

## **PUBLIC HEARING**

10. This item is to hear public comments on Zoning Ordinance amendments relative to the Village Review Board membership. Since your last meeting when you set the public hearing, the Planning Board held a public hearing on the proposed zoning amendment to amend Section 216.5 B. to add a new subsection 5 authorizing the Planning Board to act on pending Certificates of Appropriateness if, due to Board vacancies, a quorum of the Village Review Board cannot be achieved within the required timeframe of 30 days. The Board then took action to unanimously recommend the proposed amendment to the Town Council for their consideration. Copies of Ms. Breinich's memo and the draft language are included in your packet.

Suggested motion:

Motion to adopt Zoning Ordinance amendments relative to the Village Review Board membership.

## **NEW BUSINESS**

11. This report from the Recreation Commission will detail the results of a citizen survey to determine the level of community support for developing a new outdoor aquatic facility for the Town that would replace Coffin Pond. The Town Council previously authorized an expenditure of \$25,000 from the Special Revenue Fund for Recreation Programs for the purpose for conducting a full feasibility study for this project. To complete a revised feasibility study scope, the Commission is requesting authorization from the Town Council for permission to expend an additional \$3,700 from the Special Revenue Fund for a total project sum not to exceed \$28,700. Copies of a memo from the Recreation Commission Chair and the proposed resolution are in your packets. The survey results are provided under separate cover.

Suggested motion:

To adopt a resolution supplementing a previous resolution pertaining to the use of Special Revenue Funds for Recreation Programs to fund a feasibility study for an outdoor aquatic facility.

12. The Midcoast Regional Redevelopment Authority (MRRA) is requesting a Letter of Intent (LOI) from the Town of Brunswick to submit to the Department of Economic and Community Development's Office of Community Development for \$250,000 from the Community Development Block Grant program to provide funding as match for the U.S. Department of Labor's "Make It In America" grant award. Linda Smith and MRRA staff will be available to answer any questions. Copies of a memo from Ms. Smith and the draft Letter of Intent are included in your packet.

Suggested motion:

Motion to support a letter of intent for a CDBG grant for MRRA to assist with the "Make It In America" grant.

13. This item, sponsored by Councilor Walker, seeks Council permission to allow the Town to apply for funds to support this project. The funding will provide an opportunity to purchase 21 acres of property to provide public access at Woodward Cove. The Town submitted to the National Oceanic and Atmospheric Administration's Coastal and Estuarine Land Conservation Program in November for 50% of the funds necessary for acquisition. The Land for Maine's Future (LMF) request would be for the remaining 50% of funding needed. Officer Devereaux will be present to answer any questions. Copies of a memo from Officer Devereaux and maps are included in your packet.

Suggested Motion:

Motion to give permission for the Town to apply for a Land For Maine's Future Program grant to address public access needs in upper Woodward Cove.

14. This item allows the Town Council Chair to fill the vacancy on the Restoration Advisory Board created by Suzanne Johnson's resignation. In the past, it appears that the Town's position on this board was appointed by the Town Manager, but Chair Pols would like to make this appointment as he has for other boards. Ms. Johnson has recommended that David Page be considered for this appointment. Copies of a previous appointment letter from Manager Gerrish, a letter from Ms. Johnson and Mr. Page's qualifications are included in your packet.

Suggested motion:

No motion, since Chair Pols will make this appointment.

15. This item is sponsored by Council leadership in order to determine the method to select a firm to conduct the Town Manager search. Firms contacted to provide proposals have until February 6<sup>th</sup> to submit them so they can be provided to the Council prior to your February 10<sup>th</sup> workshop.

Suggested motion: No motion is required.

**CONSENT AGENDA**

- a) Approval of the Minutes of January 21, 2014: A copy of the minutes is included in your packet.
- b) Approval of the Minutes of December 23, 2013: A copy of the minutes is included in your packet.

Suggested motion:

Motion to approve the Consent Agenda

Suggested motion:

Motion to adjourn the meeting

# MANAGER'S REPORT - A NO BACK UP MATERIALS

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# MANAGER'S REPORT - B BACK UP MATERIALS



## **BRUNSWICK PUBLIC ART**

For immediate release:

Contact: Susan Weems

Telephone: 207-729-7624

e-mail: [brunspubart@gwi.net](mailto:brunspubart@gwi.net)

web site: [brunswickpublicart.com](http://brunswickpublicart.com)

### **PUBLIC SCULPTURE PLANNED FOR BRUNSWICK STATION**

Brunswick, ME - Brunswick Public Art is pleased to announce that sculptor Miles Chapin has been chosen to create a large-scale work of public art at the entrance to Brunswick's new transportation center. The selection was made after a year-long review of proposals from a pool of highly-talented artists. The sculpture will provide a striking focal point for visitors and residents at a location that has become an important gateway to the town.

Chapin, a Woolwich, Maine native, is a leading contemporary artist known for his abstract stone sculptures. The proposed sculpture is a dynamic form in black granite with 360-degree visual interest. The sculpture will rise a dramatic seven and a half feet in the center of the station's breezeway entrance, ensuring its visibility from the street as well as from the train platform.

A public art project of this scale, located at the hub of arriving and departing visitors to Brunswick, will be an immediate sign of the town's creative and cultural vitality. Along with the Bowdoin College Art Museum and Brunswick's many galleries and arts organizations, the sculpture will further identify Brunswick as a community dedicated to the arts.

Efforts are currently underway to raise funds for the sculpture. Brunswick Public Art is a non-funded town-affiliated committee dedicated to fostering and creating public art throughout Brunswick, with special emphasis on downtown. The committee raises private funds for projects once they have been identified. Tax-deductible check donations to BDA with Chapin Sculpture in the memo may be sent to BPA c/o Brunswick Downtown Association, PO Box 15, Brunswick, ME 04011.

Interested parties should contact Susan Weems or visit the Brunswick Public Art web site, [brunswickpublicart.com](http://brunswickpublicart.com), for further information.

## Miles Chapin Sculpture, LLC

Miles Chapin grew up in Maine and was exposed to sculpture at an early age. His passion for stone sculpture developed in high school where he first began to work as a sculptor. He continued to cultivate his skills while getting his B.A. in Human Ecology at College of the Atlantic. While he has always worked in stone, the style of his sculpture changes and grows as he is inspired by his local surroundings and interactions with nature. He currently lives in Westminster West, Vermont with his wife, son, daughter and their two dogs.

### Past and Current Exhibition Locations

Viles Arboretum, Augusta, Maine

Garden Exhibition at Watt Pond, Putney, Vermont

June Lacombe SCULPTURE, Pownal, Maine

Sculpture Park, Southern Vermont Art Center, Manchester, Vermont

Hayward Gardens, Westminster West, Vermont

Yester House Galleries, Southern Vermont Art Center, Manchester, Vermont

Turtle Gallery, Deer Isle, Maine

The Blum Gallery, Bar Harbor, Maine

### Art in Public Places

*Metamorphose*, The Grammar School, Putney, Vermont (2012)

*Juncture*, Sojourns Community Health Clinic, Westminster, Vermont (2012)

*Intrinsic*, Sojourns Community Health Clinic, Westminster, Vermont (2012)

*Equipoise*, The Putney School, Putney, Vermont (2006)

*Twisted Mojo*, The Putney School Admission's Office, Putney, Vermont (2005)

## Susan Weems

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**From:** June LaCombe [june.lacombe@gmail.com]  
**Sent:** Friday, March 08, 2013 12:30 PM  
**To:** brunspubart@zwi.net  
**Subject:** public art in Brunswick

While in the final stages of making a decision for your public arts installation in Brunswick, I wanted to infuse a few things...

Miles Chapin is a rising star of an artist. I have had his work in exhibitions since he graduated from the College of the Atlantic and have had great success in sales, but more importantly, his work has recieved enthusiastic support from some of the major sculpture collectors in the state. His sculpture shows a quality of design and skill far beyond his years. He comes from a Maine family who has been instrumental in supporting the arts and environmental education in the coastal region. His uncle, Tom Chapin, is a nationally renown sculptor whose work I have also included in past exhibitions. Miles studied sculpture in school and is fully committed to the field. This clarity comes through in his work. He is one of the most professional people I include in my exhibitions. He follows up. He is on time. And he is a pleasure to work with. As you embark on a commission process, these things can't be underestimated. But you will also be left with great sculpture by an artist rooted in Coastal Maine and is going to be a great success. Brunswick will be fortunate to have sculpture by Miles Chapin as the backbone of their collection. Please feel free to contact me if I can provide further information.

Sincerely, June LaCombe

June LaCombe SCULPTURE

Hawk Ridge Farm  
90 Minot Road  
Pownal, ME 04069  
207-688-4468

**MANAGER'S REPORT - C  
NO BACK UP MATERIALS**

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# MANAGER'S REPORT - D BACK UP MATERIALS

**TO:** BENET POLS, CHAIR BRUNSWICK TOWN COUNCIL AND MEMBERS OF THE BRUNSWICK TOWN COUNCIL; GARY BROWN, TOWN MANAGER

**FROM:** DAN DEVEREAUX, MARINE RESOURCE OFFICER/HARBOR MASTER

**SUBJECT:** UPDATE REGARDING APPLICATION TO MAINE NATURAL RESOURCE CONSERVATION PROGRAM

**DATE:** JANUARY 29, 2014

**CC:** TOM FARRELL, DIRECTOR OF PARKS AND RECREATION; ANNA BRIENICH, DIRECTOR OF PLANNING AND DEVELOPMENT; JOHN FOSTER, DIRECTOR OF PUBLIC WORKS

Chair Pols and members of the Brunswick Town Council:

On January 15, 2014 the Approval Committee of the Maine Natural Resource Conservation Program (MNRCP) unanimously approved the \$136,000 request submitted by Maine Coast Heritage Trust in partnership with the Town of Brunswick to address the failed impoundment, erosion, and invasive species in the southwestern portion of Brunswick's Kate Furbish Preserve.

### **Project Background**

At its June 17, 2013 meeting the Brunswick Town Council voted to adopt the Recreation, Trails and Open Space (RTOS) Management Plan for the Kate Furbish Preserve. Key recommendations of this plan included applying to MNRCP for funds to restore natural stream conditions and tidal regime to a partially failed impoundment in the southwestern portion of the Preserve; and to treat a stand of invasive common reed (*Phragmites australis*) within the salt marsh at the head of Harpswell Cove. Both tasks are intended to enhance the ecological functions of the property and benefit local marine resources.

### **Grant Source**

MNRCP is a source of funding for wetland restoration and conservation projects administered for the Maine Department of Environmental Protection and US Army Corps of Engineers by the Maine Chapter of the Nature Conservancy. Monies available through this fund come from development permit requirements for wetland mitigation. When a developer impacts a wetland resource, rather than having to delay their project until an off-site wetland restoration project is found, they pay into a fund in lieu of mitigation. This process streamlines permitting and results in significant wetland restoration and conservation by pooling funds from multiple projects. No local match is required to apply for funding support.

### **Proposed Project**

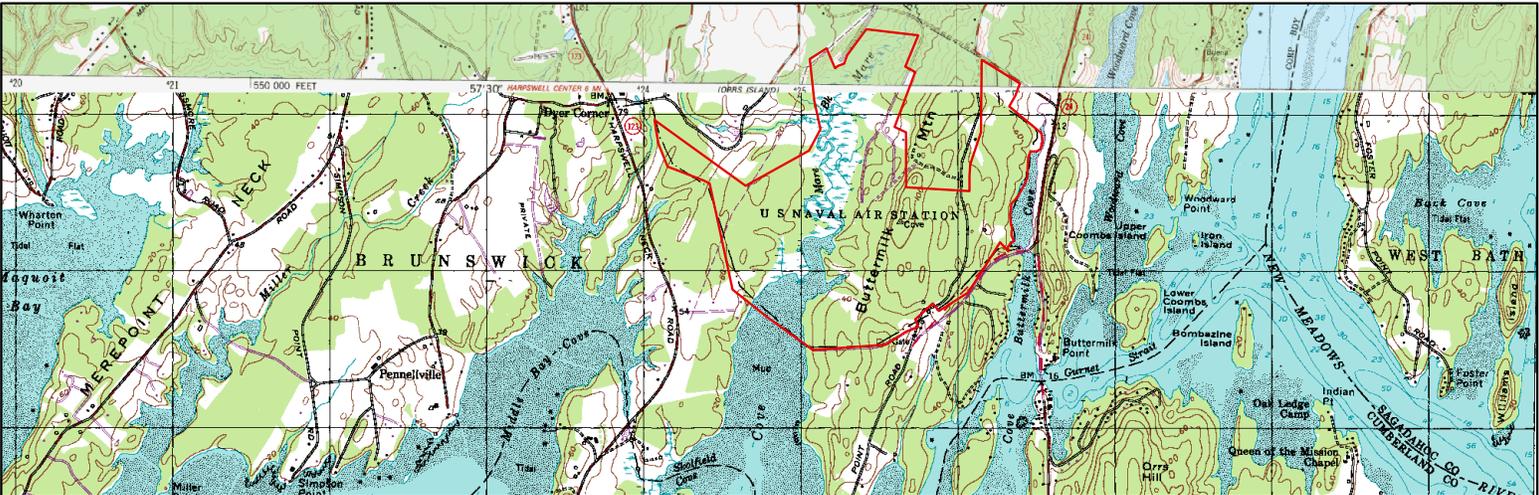
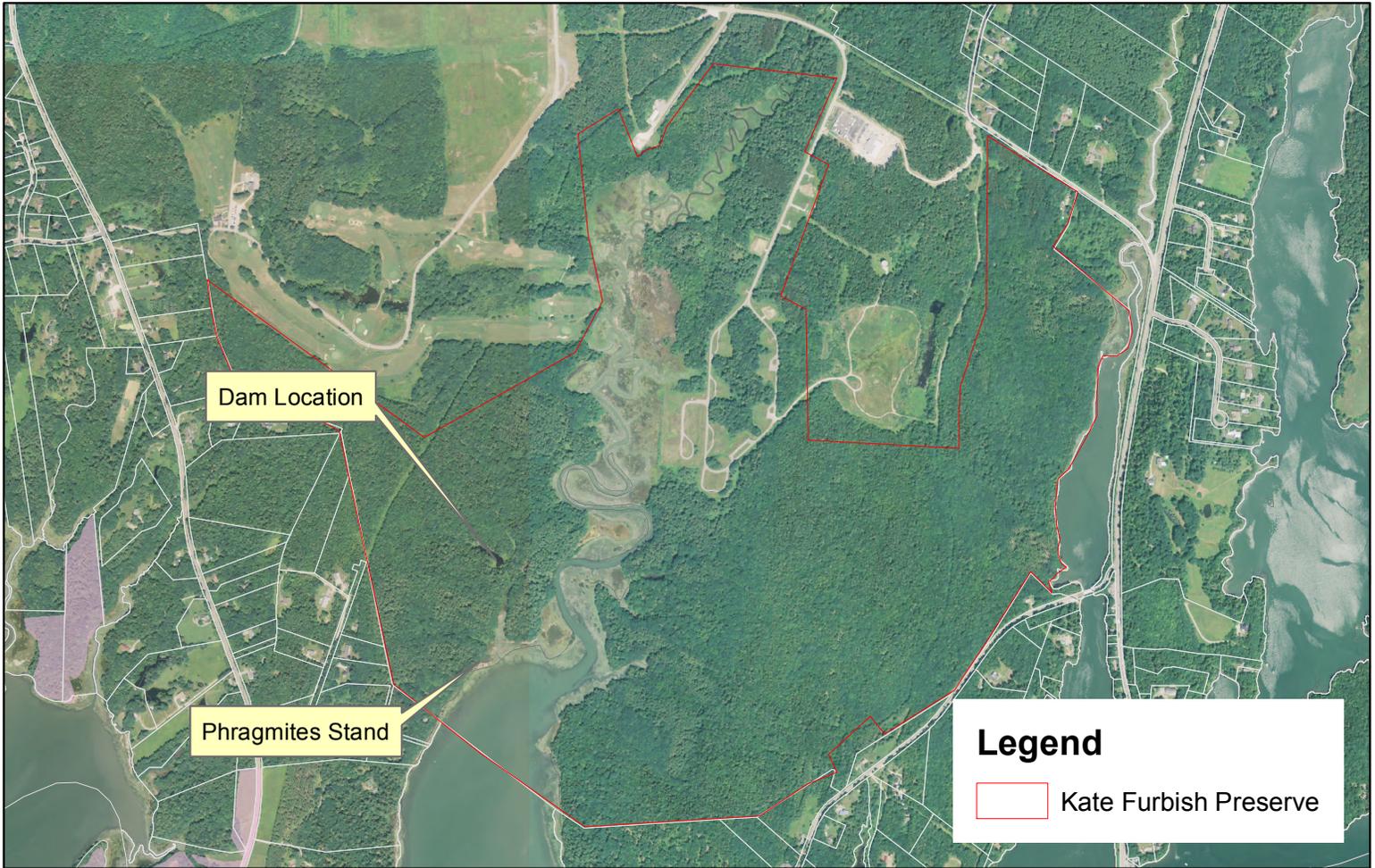
As proposed, MCHT will coordinate efforts to remove the remains of an earthen dam in the former survival training area, re-grade and replant disturbed areas, treat the common reed stand, and address areas of erosion along the perimeter leading to the work site. MCHT is currently working with a local environmental engineer to complete restoration design, permitting, and assist with construction oversight and long-term monitoring of the project. Ideally, construction would begin during frozen ground conditions. MCHT is coordinating site access with MRRA and Parks and Recreation Staff. Completing this work prior to town investments for public access trails will avoid costly repairs to trail surfaces and will likely facilitate future trail construction

given that construction equipment necessary for dam removal will be traversing proposed trail routes and could help to prepare surfaces of former perimeter roads now overgrown with vegetation. MCHT is in the process of securing necessary US Army Corps of Engineers and Maine Department of Environmental Protection Permits.

### **Local Commitment**

No local match (monetary or in kind) is required for this funding source. Given the partnership working on this project, we anticipate that limited staff time will be required for the project. MCHT is acting as the fiscal agent and grant administrator for the project. Moving forward town staff including representatives from the Department of Public Works, Parks and Recreation, and Marine Resources will be consulted in the review of design plans, construction dates, site work and project reporting.

# Kate Furbish Preserve Wetland Restoration Project



Earthen Berm



Upstream Impoundment



Salt Marsh Below Impoundment

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# MANAGER'S REPORT - E BACK UP MATERIALS

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**TOWN OF BRUNSWICK**  
TOWN MANAGERS OFFICE  
MEMORANDUM

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TO: Brunswick Council

FROM: Gary Brown, Town Manager

DATE: January 29, 2014

RE: Progress report on the Town Office renovations

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The renovations at the new Town Office continue to make progress. The Council sub-committee toured the facility on January 28 and were pleased with the progress. Councilor Watson will provide the Council with an update at the February 3 Council meeting.

The construction budget has required 22 change orders, three resulting in credits, and 19 requiring additional costs. A spreadsheet that identifies the change orders is enclosed.

In addition to the construction change orders, the project has also had additional costs. These costs include new chairs for the Council Chamber, shelving for the Clerk's vault and the installation of a security system for the building. The totals for these items are \$30,528. The net balance is a deficit of just under \$23,000. Upon completion of the project, the Council will be asked to fund the deficit either by a supplemental appropriation or transfer of funds from

I have previously informed the Council that Bowdoin College had agreed to increase their contribution to the back-up generator. The increase is from their annual contribution to the Town. The total that the College is contributing for the generator is \$81,000. The cost of the generator is \$91,619. The balance (\$10,619) is funded from the project contingency.



**Brunswick Town Hall**  
**JOB # 1323 CP LIST**

<u>CP #</u>	<u>Description</u>	<u>Pending / Proceed</u>	<u>Initiated/caused by:</u>	<u>CP Written</u>	<u>CO #</u>	<u>Amount</u>	<u>Running Total</u>
	Contract GMP			\$ 903,263.00			
	Plus net Change Orders			\$ -			
	Plus CP's written, but not yet C. O.'s			\$ 116,570.00			
				\$ 1,019,833.00			
	5% Contingency			\$ 43,192.00			
	Contribution to Generator			\$ 81,000.00			
	Total available			\$ 124,192.00			
	Current value of known CP's outstanding			\$ 116,570.00			
	Contingency remaining			\$ 7,622.00			

**ITEM 10**

**BACK UP MATERIALS**



# TOWN OF BRUNSWICK, MAINE

INCORPORATED 1739

DEPARTMENT OF PLANNING AND DEVELOPMENT  
28 FEDERAL STREET  
BRUNSWICK, ME 04011

ANNA M. BREINICH, AICP  
DIRECTOR OF PLANNING & DEVELOPMENT

PHONE: 207-725-6660  
FAX: 207-725-6663

January 30, 2014

**Memo to:** Brunswick Town Council  
Gary Brown, Town Manager  
**From:** Anna Breinich, AICP  
**Subject:** Public Hearing for Proposed Amendment to Brunswick Zoning Ordinance, Section 216, Village Review Zone

As you know, Town Council recently amended its appointments policy for Town Boards, Commissions and Committees. The amended policy more clearly addresses position vacancies (Section 15), in particular for the Board of Assessment Review, Marine Resources Committee, Planning Board, Village Review Board and Zoning Board of Appeals, stating that if a member's term has expired, the position will be considered vacant as of the date the term expires. In the past, members of a Board, Commission or Committee have been able to continue serving until either that person was reappointed or a new member was appointed by Council.

Until earlier this month, for almost a year, the Village Review Board (VRB) has had only 4 members, the ordinance-required quorum. Full membership is 7 members. With the amended appointments policy, the Board was down to 3 members, one short of the ordinance-required quorum of 4 members, and could not meet to conduct business.

The Planning Board held a public hearing on the attached zoning amendment to amend Section 216.5 B. to add a new subsection 5 authorizing the Planning Board to act on pending Certificates of Appropriateness if, due to Board vacancies, a quorum of the Village Review Board cannot be achieved within the required timeframe of 30 days. The Board then took action to unanimously recommend the proposed amendment to Town Council for their consideration.

With recent Council appointments to the Village Review Board, the immediate need for this amendment is lessened. However staff concurs with Planning Board's recommendation to favorably consider the amendment so as to avoid a similar situation in the future.

I will be in attendance at your meeting for further discussion and/or questions.

Attachment

**PROPOSED AMENDMENT TO BRUNSWICK ZONING ORDINANCE  
SECTION 216 VILLAGE REVIEW ZONE (VRZ)**

*As recommended by the Brunswick Planning Board to Town Council on January 28, 2014*

**216.5 Certificate of Appropriateness**

- A. A Certificate of Appropriateness is required for any of the following activities in the Village Review Zone involving contributing resources or, if visible from a public right-of-way, noncontributing resources:
1. Construction of a new structure.
  2. Addition to an existing structure.
  3. Alteration to the exterior appearance of any structure with the exception of in-kind replacement of windows, facades and building ornamentation, normal maintenance and painting. This includes, but is not limited to, any construction requiring a building permit, the construction of fences, changes in windows or façade materials, or the elimination or addition of any ornamentation.
  4. Relocation of any structure, or portions thereof.
  5. Demolition of any structure or portions thereof.
  6. Construction, installation or alteration of any sign, with the exception of directional signage less than three square feet in size.
- B. The power to grant a Certificate of Appropriateness for new construction, additions, alterations, relocations and demolitions under this Section is vested in the Village Review Board; however that power is hereby delegated in accordance with the following provisions:
1. The Director of Planning and Development shall have the power to grant a Certificate of Appropriateness in cases where, in her/his judgment, the impact of the proposed activities will be minor, as defined in Section 216.8(B)(1) herein, and in keeping with the review standards of the Ordinance.
  2. The Director of Planning and Development shall regularly apprise the Village Review Board of Certificates of Appropriateness granted in accordance with subparagraph 1.
  3. Notwithstanding the authority delegated to the Director of Planning and Development, the applicant and the Village Review Board Chair each has the right to require review of an application by the Village Review Board.
  4. The Director of Planning and Development may find proposed changes to an approved Certificate of Appropriateness to be a minor modification, in which case approval by the Village Review Board shall not be required.
  - 4.5. In the event vacancies exist on the Village Review Board such that a quorum cannot be achieved to permit the Village Review Board to act on a pending or new application for a Certificate of Appropriateness, the Brunswick Planning Board shall act as the Village Review Board and shall hear and decide any such pending or new application, applying the criteria set forth in this Section 216. To the extent the applicant is also required to seek development review from the Planning Board in accordance with Chapter 4 of this Ordinance, the Planning Board shall hear the application for a Certificate of Appropriateness together with such development review. The Village Review Board shall hear and decide new applications filed after vacancies on the Village Review Board are filled such that a quorum can be achieved.

- C. If a structure or property has been damaged by fire, flood, storm or other disaster, and emergency temporary repairs or partial demolition are required in order to protect health or safety, or to prevent further damage to the structure or property, the Codes Enforcement Officer may waive temporarily the requirements of this Section for a Certificate of Appropriateness and issue a building permit for such emergency temporary repairs, including partial demolition. No later than 30 days after the issuance of the permit, the permit applicant must apply for a Certificate of Appropriateness for the repairs or demolition already made and/or any planned permanent repairs or additional demolition work that requires a Certificate of Appropriateness under Section 216.5. A.

ITEM 11

BACK UP MATERIALS

TO: Brunswick Town Council  
FR: Jeff Ward, Chairperson, Brunswick Recreation Commission  
DT: January 29, 2014  
RE: Outdoor Aquatic Feasibility Survey

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Attached are the results of the feasibility survey conducted by Leisure Vision/ETC Institute regarding the community's interest in building an outdoor pool in Brunswick, their preference as to the location for a pool, and the components they most desire in such a facility.

Commission Vice-Chair, Kristi Hatrick, Director Tom Farrell, and I also had the opportunity to review the survey results with Ron Vine, the head of Leisure Vision.

There is a lot of information contained in the report. After reviewing the report and speaking with Mr. Vine, Commissioner Hatrick and I believe that these are the key findings:

- The community is very supportive of locating a pool adjacent to the new Recreation Center on the former Naval Base.
- There is significant support in community for building a new outdoor pool.
- Community use of a new pool would be dramatically higher than the current use of Coffin Pond. The projected increase in use is most significant with teens and seniors.
- There is community support for a bond issue to support the construction of the pool although it is unclear whether there is sufficient support for the size of a bond that would be required to finance the entire construction of the facility.

We have asked to be placed on your agenda to publicly present the survey and discuss the results. The Commission believes that these results are very informative and encouraging. As such, we will be asking for your permission to proceed with the next phase which will produce a conceptual design, a projected project cost, and the anticipated annual operating cost. In order to complete the feasibility study, we need the Council to approve an additional \$3,700 allocation from the Recreation Department Special Revenue Fund for Recreation Programs. A resolution for this purpose is attached for your consideration.

In addition, given the community support for locating the pool near the Recreation Center at 220 Neptune Drive at Brunswick Landing, we would greatly appreciate your assistance in encouraging the Navy to expedite the environmental assessment of the land adjacent to the building.

Thank you for your consideration.

**TOWN OF BRUNSWICK, MAINE TOWN COUNCIL**

**RESOLUTION PERTAINING TO USE OF THE SPECIAL REVENUE FUND FOR RECREATION PROGRAMS FOR ADDITIONAL FUNDING OF A FEASIBILITY STUDY FOR AN OUTDOOR AQUATIC FACILITY**

WHEREAS, the Town Council of the Town of Brunswick adopted on June 11, 1992 a resolution entitled "RESOLUTION REGARDING THE ESTABLISHMENT OF A SPECIAL REVENUE FUND FOR RECREATION PROGRAMS" which was amended by a resolution dated August 4, 1997 (the "Resolution"); and

WHEREAS, during the FY 2010-2011 budget deliberations with the Brunswick Town Council, the Recreation Commission discussed the past performance and projected long range viability of continuing the operation of the Coffin Pond swimming area; and

WHEREAS the Recreation Commission determined and recommended the need to obtain professional assistance from firms specializing in aquatic facility development to conduct a market analysis, develop a citizen input process, administer a random statistically valid survey to determine potential use levels and community support, identify facility programming, perform site analysis, project both capital and operations costs and corresponding revenues and provide conceptual drawings of a new aquatic facility; and

WHEREAS, on December 3, 2012, the Brunswick Town Council authorized the expenditure of funds from the Special Revenue Fund for Recreation Programs in an amount not to exceed \$25,000 for the purpose of conducting a study to determine the feasibility of developing a new outdoor aquatic facility for the community, and

WHEREAS, the structure and scope of the feasibility study have been revised, requiring the expenditure of an additional \$3,700 to complete the study, and

WHEREAS, based upon the completion of the first phase of the study, the Recreation Commission recommends proceeding with the next and final phases to complete the study, and

WHEREAS, the Town Council concurs with the recommendations of the Recreation Commission;

NOW THEREFORE BE IT RESOLVED that the Brunswick Town Council authorizes the additional expenditure of \$3,700 from the Special Revenue Fund for Recreation Programs in a total amount not to exceed \$28,700 for the purpose of conducting a study to determine the feasibility of developing a new outdoor aquatic facility for the community.

Proposed to Town Council – February 3, 2014  
Adopted by Town Council -

ITEM 12

BACK UP MATERIALS



# Town of Brunswick, Maine

Incorporated 1739

Economic and Community Development  
Department

Linda E. Smith  
Business Development Manager

28 FEDERAL STREET  
BRUNSWICK, ME 04011  
TELEPHONE 207-721-0292  
FAX # 207-725-6663

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**TO:** Brunswick Town Council  
**FROM:** Linda Smith  
**SUBJECT:** Midcoast Regional Redevelopment Authority's Request for Community Development Block Grant funds to support matching requirement for Make It In America grant  
**DATE:** January 28, 2014

The Midcoast Regional Redevelopment Authority (MRRA) is requesting a Letter of Intent (LOI) from the Town of Brunswick to submit to the Department of Economic and Community Development's Office of Community Development for \$250,000 from the Community Development Block Grant program to provide funding as match for the U.S. Department of Labor's "Make IT In America" grant award.

The Midcoast Regional Innovation Initiative (MRRA, Coastal Counties Workforce Inc., and Maine MEP) proposed via the *Make it in America* federal funding opportunity to accelerate Foreign Direct Investment (FDI), re-shore jobs, and expand manufacturing employment by establishing an advanced manufacturing and technology accelerator and providing workforce training and supply chain technical assistance within a 50-mile radius of the former Naval Air Station Brunswick. MRRA and the co-applicants were awarded the grant for their integrated multi-faceted strategy to:

- Improve regional infrastructure by renovating a 93,000 square foot, former Navy maintenance/repair facility to create an advanced manufacturing accelerator, TechPlace, that targets four sectors with growth potential: aerospace/aviation, advanced materials/composites, renewable energy, and biotechnology;
- Strengthen Small and Medium Sized Enterprises (SMEs) in the four targeted sectors by undertaking supply chain initiatives that better position regional manufacturers for growth opportunities;
- Institute training programs to build a highly-skilled and diverse workforce capable of meeting employer demand in the four targeted technology sectors.

To achieve these goals, MRRA is requesting \$250,000 in Maine DECD funds to complete a \$1.5 million renovation of Building 250 at Brunswick Landing: Maine's

Center for Innovation (formerly NASB). The scope of work includes roof repair, HVAC system repair, general construction, Americans with Disabilities Act upgrades and compliance, National Fire Protection Act 101 Life Safety Code compliance, and Project Management. MRRA has secured \$1,250,000 of the engineering estimates of \$1,500,000 required for the scope of work completion. EDP funds of \$250,000 are requested no later than September 2014 and would be utilized to complete the scope of work items. MRRA and its Make it in America grant partners, anticipate the timely creation of 9 jobs.

The draft Letter of Intent is attached for your reference. Steve Levesque, MRRA Executive Director, will be available at the February 3, 2014 Town Council meeting to answer any questions.

Attachment

Cc: Gary Brown, Town Manager, Town of Brunswick  
Steve Levesque, Executive Director, MRRA

State of Maine  
**Community Development Block Grant Program**  
**2014 Economic Development Program**  
**Letter of Intent to Apply**

Due the first Friday of each month by 4:00 p.m.\*

Letters of Intent may be submitted via email to: [ocd.loi@maine.gov](mailto:ocd.loi@maine.gov)

Please enter "EDP LOI" in the subject line.

**2014 CDBG Program Funds are not expected to be available before July 1, 2014.**

All communities wishing to apply for assistance under the 2014 Economic Development Program must use this Letter of Intent to document compliance with requirements established by Title I of the Housing and Community Development Act of 1974, as amended and the State of Maine CDBG program. Applicants who submit a completed Letter of Intent deemed to be fully compliant will be notified by OCD that they are eligible to submit a final application. Eligibility to submit a final application does not imply final project approval or funding.

**EDP PROJECT PARTICIPANTS**

**Legal Applicant (Community):**

<b>Applicant:</b>	Town of Brunswick	<b>Phone:</b>	207-725-6659
<b>Address:</b>	28 Federal Street	<b>Fax:</b>	207-725-6663
<b>City, ZIP+4:</b>	Brunswick, ME 04011	<b>E-Mail:</b>	gbrown@brunswickme.org
<b>Contact:</b>	Gary Brown, Town Manager		
<b>DUNS #:</b>	Applicant DUNS (Dunn & Bradstreet) #: 077466274 (visit <a href="http://www.nea.gov/grants/apply/DUNS.html">www.nea.gov/grants/apply/DUNS.html</a> if applicant needs to obtain a number)		
<b>OCD Development Program Manager (Name and Date of Consultation Required):</b> Deborah Johnson January 7, 2014			

**Business to be assisted:**

<b>Business</b>	Midcoast Regional Redevelopment Authority	<b>Phone:</b>	207-798-6512
<b>Address:</b>	2 Pegasus Street, Suite 1 Unit 200	<b>Fax:</b>	207-798-6510
<b>City, ZIP:</b>	Brunswick, ME 04011	<b>E-Mail:</b>	stevel@mrta.us
<b>Contact:</b>	Steve Levesque	<b>Title</b>	Executive Director
<b>DUNS #:</b>	Applicant Business DUNS (Dunn & Bradstreet) #: 808096304 (visit <a href="http://www.nea.gov/grants/apply/DUNS.html">www.nea.gov/grants/apply/DUNS.html</a> if business needs to obtain a number)		
<b>Is business to be assisted</b> <input type="checkbox"/> <b>Retail</b> <input checked="" type="checkbox"/> <b>Start-up</b>			

**\*If the first Friday of the month falls on a holiday the EDP Letter of Intent will be due by 4:00pm on the next business day.**

## EDP ELIGIBLE ACTIVITY CATEGORIES

	<p><b>Grants to Municipalities:</b> for acquisition, relocation, demolition, clearance, construction, reconstruction, installation and rehabilitation <u>associated with public infrastructure</u> projects such as water and sewer improvements, flood and drainage improvements, publicly-owned commercial and industrial buildings, parking, streets, curbs, gutters, sidewalks, etc. <b>\$1,000,000</b></p> <p><u>All public infrastructure must be owned by the municipality or public or private utility and be in support of an identified business.</u></p>
	<p><b>Grants to Municipalities for Direct Business Support:</b> for capital and non-capital equipment, land and site improvements, rehabilitation or construction of commercial or industrial buildings, job training, working capital and capital equipment and be in support of an identified business. <b>Acquisition is not an allowable activity under this group.</b> <b>\$1,000,000</b></p>

***Applicants may apply in only one specific grant activity group.***

## **ECONOMIC DEVELOPMENT PROGRAM FUNDS CANNOT BE USED TO REFINANCE EXISTING DEBT**

### PROJECT INFORMATION

Using the space provided please provide a clear, concise description of the proposed development project. Be sure to clearly explain how EDP funds will be utilized, the financing gap that exists in order to do the project and the timeline in which the CDBG-EDP funds will be expended and information relative to jobs being created and/or retained.

The Midcoast Regional Innovation Initiative (MRRA, Coastal Counties Workforce Inc., and Maine MEP) proposed via the *Make it in America* federal funding opportunity to accelerate Foreign Direct Investment (FDI), re-shore jobs, and expand manufacturing employment by establishing an advanced manufacturing and technology accelerator and providing workforce training and supply chain technical assistance within a 50-mile radius of the former Naval Air Station Brunswick. MRRA and the co-applicants were awarded the grant for their integrated multi-faceted strategy to:

- Improve regional infrastructure by renovating a 93,000 square foot, former Navy maintenance/repair facility to create an advanced manufacturing accelerator, TechPlace, that targets four sectors with growth potential: aerospace/aviation, advanced materials/composites, renewable energy, and biotechnology;
- Strengthen Small and Medium Sized Enterprises (SMEs) in the four targeted sectors by undertaking supply chain initiatives that better position regional manufacturers for growth opportunities;
- Institute training programs to build a highly-skilled and diverse workforce capable of meeting employer demand in the four targeted technology sectors.

To achieve these goals, Midcoast Regional Redevelopment Authority (MRRA) is requesting \$250,000 in Maine DECD funds to complete a \$1.5 million renovation of Building 250 at Brunswick Landing: Maine's Center for Innovation (formerly NASB). The scope of work includes roof repair, HVAC system repair, general construction, Americans with Disabilities Act upgrades and compliance, National Fire Protection Act 101 Life Safety Code compliance, and Project Management. MRRA has secured \$1,250,000 of the engineering estimates of \$1,500,000 required for the scope of work completion. EDP funds of \$250,000 are requested no later than September 2014 and would be utilized to complete the scope of work items. MRRA and its Make it in America grant partners, anticipate the timely creation of 9 jobs.

The funding would support the effective reuse of a key property, while providing for low cost operational and manufacturing space, access to common services and equipment already located in the building and allow for business development and growth for emerging companies.

## EDP DOLLARS PER JOB CREATED

The maximum CDBG participation per job created with EDP funds is \$30,000.

## JOB RETENTION INFORMATION (Fill in job information below)

**Number of Full-Time Equivalent (FTE) Jobs to be Retained:**

The applicant must also attach documentation to this Letter of Intent such as public announcement of lay-offs, public announcement of imminent closure, financial records) of impending job loss without CDBG Program assistance. **Completion of Job Retention Assurances and Job Retention Summary Documentation must be completed and submitted to the Office of Community Development before applicant will be invited to submit an EDP application.** Forms require completion and must be signed by both the municipal and business CEO. Please pay close attention to the definition of permanent, full time and full time equivalent jobs.

## JOB CREATION INFORMATION (Fill in job information below)

**Number of Full-Time Equivalent (FTE) Jobs to be Created:**

Occupation/Job Title	# of Jobs	Work Location	Hire Date	Hourly Salary	Hourly Salary <b>with</b> eligible fringe benefits
Technician	5	TechPlace	12/15	\$20.00	\$26.33
Admin Support	4	TechPlace	12/15	\$14.00	\$19.87

In determining CDBG National Objective compliance with job retention only **Permanent** jobs may be counted; temporary jobs may not. Full time jobs require a worker to work at least 1750 hours per year. Part time jobs require a worker to work at least 875 hours but less than 1750 hours per year. Part-time jobs **must** be converted to Full Time Equivalents (FTE). An FTE is defined as two part time jobs. **Seasonal** jobs may count only if the seasonal job lasts long enough and provides sufficient income to be considered the employee's principal occupation. (Contact OCD prior to counting seasonal jobs towards LMI benefit.) **All** permanent jobs created by the project must be counted, regardless of funding source(s). Jobs indirectly created by the project (i.e., remote location, "trickle down" jobs) do not count.

## G. COST ESTIMATES & PROJECT FUNDING

Provide the estimated project cost, amount of CDBG funds to be requested and sources, amounts and dates secured for all anticipated cash matching funds.

Applicants for Economic Development Program funds must certify and provide documentation, at time of application, that there is a 100% cash match of the total EDP award. Matching funds must be directly related to the activities undertaken with EDP funding and must be firm commitments from non-CDBG funds and documented by binding commitment letters submitted with the final application. Prior commitments and in-kind contributions are not considered as match. Project must demonstrate that there is a gap between sources and uses and that CDBG funds are needed to fill that gap.

Communities receiving an EDP award may not receive any other EDP award for the same project or business during the same program year **or** for the same or project or business from a prior program year that has not met **final** closeout status.

All construction estimates should be prepared by the Engineer/Architect. Take into account the inflation rate in relation to the anticipated starting date of the project and applicable DAVIS/BACON wage rates as they apply to construction costs. **Please note projects with a total cost exceeding \$3,000,000 are not eligible for EDP assistance. The minimum request for EDP assistance is \$100,000\*.**

<b>Total Estimated Project Cost:</b>	\$ 1,500,000.00	<b>CDBG Request:</b>	\$ 250,000.00
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<b>Funding Source</b>	<b>Amount</b>	<b>Date Secured</b>
Economic Development Administration	\$ 750,000.00	September 25, 2013
MRRA	\$ 250,000.00	October 31, 2013
Brunswick Development Corporation	\$ 250,000.00	October 30, 2013
<b>TOTAL:</b>	<b>\$ 1,250,000.00</b>	

**EDP PROJECTS IN SUPPORT OF RETAIL BUSINESSES**

**EDP applications in support of a retail business must attach written documentation to this Letter of Intent for each of the following limited conditions:**

- 1.** The retail business represents the provisions of new products and services previously unavailable in the community or is a tourism-related business; and
- 2.** The development or expansion of the retail business represents a net economic gain for the community and the region. Applications supporting a retail business or businesses are required to certify that the development represents a new overall gain for the region economy and not a shift from existing established businesses to a new or expanded one; and
- 3.** The retail business is located in either a downtown district meeting the definition of PL 776 enacted by the 119<sup>th</sup> legislature; or a designated local growth area contained in an adopted and consistent comprehensive plan; and
- 4.** At least 50% of the jobs created by the retail business must be full time jobs.

**\*Projects seeking less than \$100,000 in CDBG EDP funds must have received approval from the Office of Community Development prior to submission of the EDP Letter of Intent.**

**Applicant & Business Certifications**

As an authorized official of the applicant community and/or business, I certify under the penalties of perjury that:

1. To the best of my knowledge and belief, all information contained in this Letter of Intent and all attached documentation is true and correct and current as of the date signed below;
2. This Letter of Intent complies with all applicable State and federal laws and regulations;
3. **Both parties signing this Letter of Intent are cognizant of the requirement that should the intended Job Creation/Retention National Objective of the CDBG program not be met all CDBG funds must be repaid to the State of Maine CDBG program; DECD may elect to secure such requirement/repayment with assets of the Applicant Business for a term of up to five years should this project be approved for funding;**
4. Approval of this Letter of Intent by OCD to submit a final application does not imply final project approval or funding.

Signature of Chief Executive Officer:	Printed or Typed Name:  Gary L. Brown
Name of Applicant <b>Community</b> :  Town of Brunswick	Date:
Signature of Chief Executive Officer:	Printed or Typed Name:  Steven H. Levesque
Name of Applicant <b>Business</b> :  Midcoast Regional Redevelopment Authority	Date:

**STATE OF MAINE  
COMMUNITY DEVELOPMENT BLOCK GRANT  
ECONOMIC DEVELOPMENT PROGRAM GRANT APPLICATION**

**GRANTEE/BUSINESS ASSURANCES**

**JOB RETENTION**

The Business \_\_\_\_\_ (as identified below), having applied for funding from the Town/City of \_\_\_\_\_ (as identified below) through the Maine assures that it has discussed job retention project goals with the applicant business. The Municipality is assured that \_\_\_\_\_ jobs **will be retained for a period of no less than two years from the date of the CDBG contract between the municipality and the State of Maine.** The Business (as identified below) assures that these jobs will be retained and that timely and completed documentation will be provided to the Municipality necessary to verify job retention achievements. Both the Municipality and the Business assure that low and moderate-income persons hold at least 51% of the jobs retained.

In determining CDBG National Objective compliance with job retention only **Permanent** jobs may be counted; temporary jobs may not. Full time jobs require a worker to work at least 1750 hours per year. Part time jobs require a worker to work at least 875 hours but less than 1750 hours per year. Part-time jobs **must** be converted to Full Time Equivalents (FTE). An FTE is defined as two part time jobs. **Seasonal** jobs may count only if the seasonal job lasts long enough and provides sufficient income to be considered the employee's principal occupation. (Contact OCD prior to counting seasonal jobs towards LMI benefit.) **All** permanent jobs created by the project must be counted, regardless of funding source(s). Jobs indirectly created by the project (i.e., remote location, "trickle down" jobs) do not count.

**All job retention information reported on this form will be reviewed by OCD.**

\_\_\_\_\_  
Municipality

\_\_\_\_\_  
Signature of Municipal CEO

\_\_\_\_\_  
Date

\_\_\_\_\_  
Business

\_\_\_\_\_  
Signature of Business CEO

\_\_\_\_\_  
Date

**The applicant must attach documentation to this form (such as public announcement of lay-offs, public announcement of imminent closure, financial records) of impending job loss without CDBG Program assistance.**

**STATE OF MAINE  
COMMUNITY DEVELOPMENT BLOCK GRANT  
ECONOMIC DEVELOPMENT PROGRAM GRANT APPLICATION**

**JOB RETENTION SUMMARY DOCUMENTATION**

TO BE DETERMINED BY EMPLOYEE SURVEY AND VERIFIED THROUGH SUPPORTING DOCUMENTATION

JOB TITLE	Job Class*	# JOBS RETAINED Qualified		# LMI JOBS RETAINED		# NON LMI JOBS RETAINED	
		full time	part time	full time	part time	full time	part time

***All* existing employees must be surveyed prior to making application to determine LMI status and establish an employment baseline for future reference.  
All job retention information reported on this form must be submitted for reviewed by OCD.**

**\* Attach a job description for each job title for which a position will be retained and use the job category definition numbers outlined below to indicate job class.**

The above information has been compiled using the individual surveys of all affected employees of the Business (as identified above).

This survey was based on family income as defined by the HUD Low/Moderate Income Limits, which apply to the Community Development Block Grant (CDBG) Program. To the best of my knowledge, all information represented above is true and factual. Assurances are also given that "Clear and Objective" evidence exists documenting the above jobs would actually be lost without CDBG Program funding, and that this evidence exists in the form of a notice issued by the assisted party to affected employees, a public announcement, relevant financial records or other form acceptable to the Department of Economic and Community Development.

\_\_\_\_\_  
Signature of Human Resources Officer

\_\_\_\_\_  
Date

## JOB CATEGORY DEFINITIONS AND CLASS NUMBERS

1. **Officials and Managers** – Occupants requiring administrative personnel who set broad policies, exercise overall responsibility of execution of these policies, and individual departments or special phases of a firm's operations. This includes: Officials, Executives, middle management, plant managers and superintendents, salaried supervisors who are members of management, purchasing agents and buyers, and kindred workers.
2. **Professional** – Occupants requiring either college graduation or experience of such kind and amount as to provide a comparable background includes: accountants and auditors, airplane pilots and navigators, architects, artists, chemists, designers, dietitians, editors, engineers, lawyers, librarians, mathematicians, natural scientists, registered professional nurses, professional and labor relations workers, physical scientists, physicians, social scientists, teachers, and kindred workers.
3. **Technicians** – Occupants requiring a combination of basic scientific knowledge and manual skill which can be obtained through about 2 years of post-high school education such as is offered in many technical institutions and junior colleges, or through equivalent on the job training. This includes: computer programmers and operators, drafters, engineering aides, junior engineers, mathematic aides, licensed practical or vocational nurses, photographers, radio operators, scientific assistants, surveyors, technical illustrators, technicians (medical, dental, electronic, physical science) and kindred workers.
4. **Sales** – Occupants engaging wholly or primarily in direct selling. This includes: advertising agenda and sales workers; insurance agents and brokers; real estate agents and brokers; sales workers, demonstrators and retail sales workers; and sales clerks, grocery clerks and cashiers; and kindred workers.
5. **Office and Clerical** – Includes all clerical-type work regardless of level of difficulty, where the activities are predominantly non-manual though some manual work not directly involved with altering or transporting the products is included. This includes: bookkeepers, cashiers, collectors (bills and accounts), messengers and office helpers, office machine operators, shipping and receiving clerks, stenographers, typists, and secretaries, telegraph and telephone operators, and kindred workers.
6. **Craft Worker (skilled)** – Manual workers of relatively high level having a thorough and comprehensive knowledge of the processes involved in their work. Exercise considerable independent judgment and usually receive an extensive period of training. This includes: the building trades, hourly paid supervisors and lead operators (who are not members of management), mechanic and repairers, skilled machining occupations, compositors and typesetters, electricians, engravers, job setters (metal), motion picture projectionists, pattern and model makers, stationary engineers, tailors, and kindred workers.

**STATE OF MAINE**  
**COMMUNITY DEVELOPMENT BLOCK GRANT**  
**Economic Development Program Development Grant Application**  
**JOB CATEGORY DEFINITIONS AND CLASS NUMBERS**  
**(continued)**

7. **Operatives (semi-skilled)** – Workers who operate machines or other equipment or perform other factory-type duties of intermediate skill level which can be mastered in a few weeks and require only limited training. This includes: apprentices (auto mechanics, plumbers, electricians, machinists, mechanics, building trades, metal working trades, printing trades, etc.), operatives, attendants (auto service and parking), blasters, chauffeurs, delivery workers, dress makers and sewers (except factory), dryer's furnaces workers, heaters (metal), laundry and dry cleaning operatives, milliners, mine operatives and laborers, motor operators, oilers and greasers (except auto), painters (except construction and maintenance), photographic process workers, boiler tenders, truck and tractor drivers, weavers (textile), welders and flame metals workers, and kindred workers.
8. **Laborers (unskilled)** – Workers in manual occupations which generally require no special training perform elementary duties that may be learned in a few days and require the application of little or no independent judgment. This includes: garage laborers; car washers and greasers; gardeners (except farm) and ground keepers; stevedores; wood choppers; laborers performing lifting, digging, mixing loading, and pulling operations; and kindred workers.
9. **Service workers** – Workers in both protective and non-protective service occupations. This includes attendants (hospital and other institutions, professional and personal service, including nurses aides and orderlies), barbers, chair workers and cleaners, cooks (except household), counter and fountain workers, elevator operators, firefighters and fire protection guards, door keepers, stewards, janitors, police officers and detectives, porters, waiters and waitresses, and kindred workers.

ITEM 13

BACK UP MATERIALS

**TO:** BENET POLS, CHAIR BRUNSWICK TOWN COUNCIL AND MEMBERS OF THE BRUNSWICK TOWN COUNCIL; GARY BROWN, TOWN MANAGER

**FROM:** DAN DEVEREAUX, MARINE RESOURCE OFFICER/HARBOR MASTER

**SUBJECT:** APPLICATION TO LAND FOR MAINE'S FUTURE PROGRAM

**DATE:** JANUARY 29, 2014

**CC:** TOM FARRELL, DIRECTOR OF PARKS AND RECREATION; ANNA BRIENICH, DIRECTOR OF PLANNING AND DEVELOPMENT

Chair Pols and members of the Brunswick Town Council:

Brunswick has an opportunity to receive funding to address public access needs in upper Woodward Cove. On behalf of a team of partners working to secure this funding, I request that you consider approving submission of an application to the Land for Maine's Future Program (LMF). I look forward to your feedback and will be happy to answer questions that you may have.

### **Project Background**

This past September, I met with Brunswick-Topsham Land Trust (BTLT) and Maine Coast Heritage Trust (MCHT) to discuss water access needs in the context of the ongoing harbor management planning effort currently underway with the Marine Resources Committee. At this meeting I identified Woodward Cove as a priority area needing secured public access particularly for shellfish harvesters. In November 2013, the Town Council voted to approve submission of a funding request to the National Oceanic and Atmospheric Administration's Coastal and Estuarine Land Conservation Program. We recently found out that the federal appropriations bill zeroed out funding for the program for 2014. LMF water access funds seem to be a good fit as our next approach to protecting this property.

### **Grant Source**

LMF is a competitive funding source administered through Maine's Department of Agriculture, Conservation, and Forestry (DACF). MCHT recently met with DACF staff to present the project which was received enthusiastically. As proposed, the town of Brunswick would be the applicant for 50% of the fair market value of the parcel (LMF requires a 1:1 match). MCHT has agreed to assist by preparing the application and pursuing necessary sources of match.

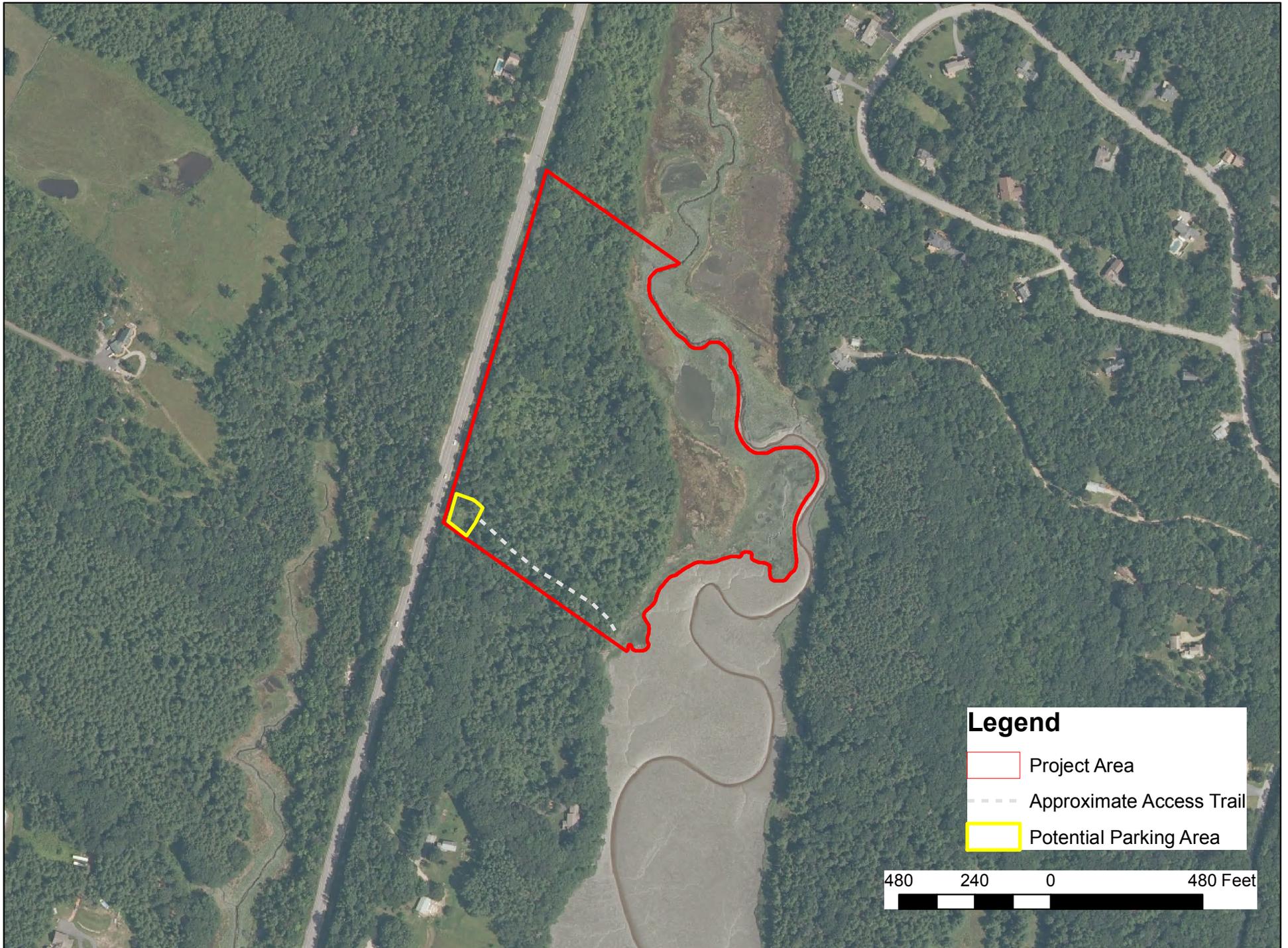
### **Proposed Project**

The site consists of a 21-acre property in east Brunswick located on Route 24. Aside from the potential to secure walk-in access and perhaps hand-carry boat access to upper Woodward Cove, the parcel includes significant saltmarsh and upland forest allowing for a variety of recreational uses. A small off-street gravel parking area currently exists, but will require improvements to facilitate future access needs. LMF does include funding opportunities for future access amenities. The property is currently assessed at \$48,000 and MCHT is working with the owner (Unitarian Universalist Church of Brunswick) to complete appraisal work.

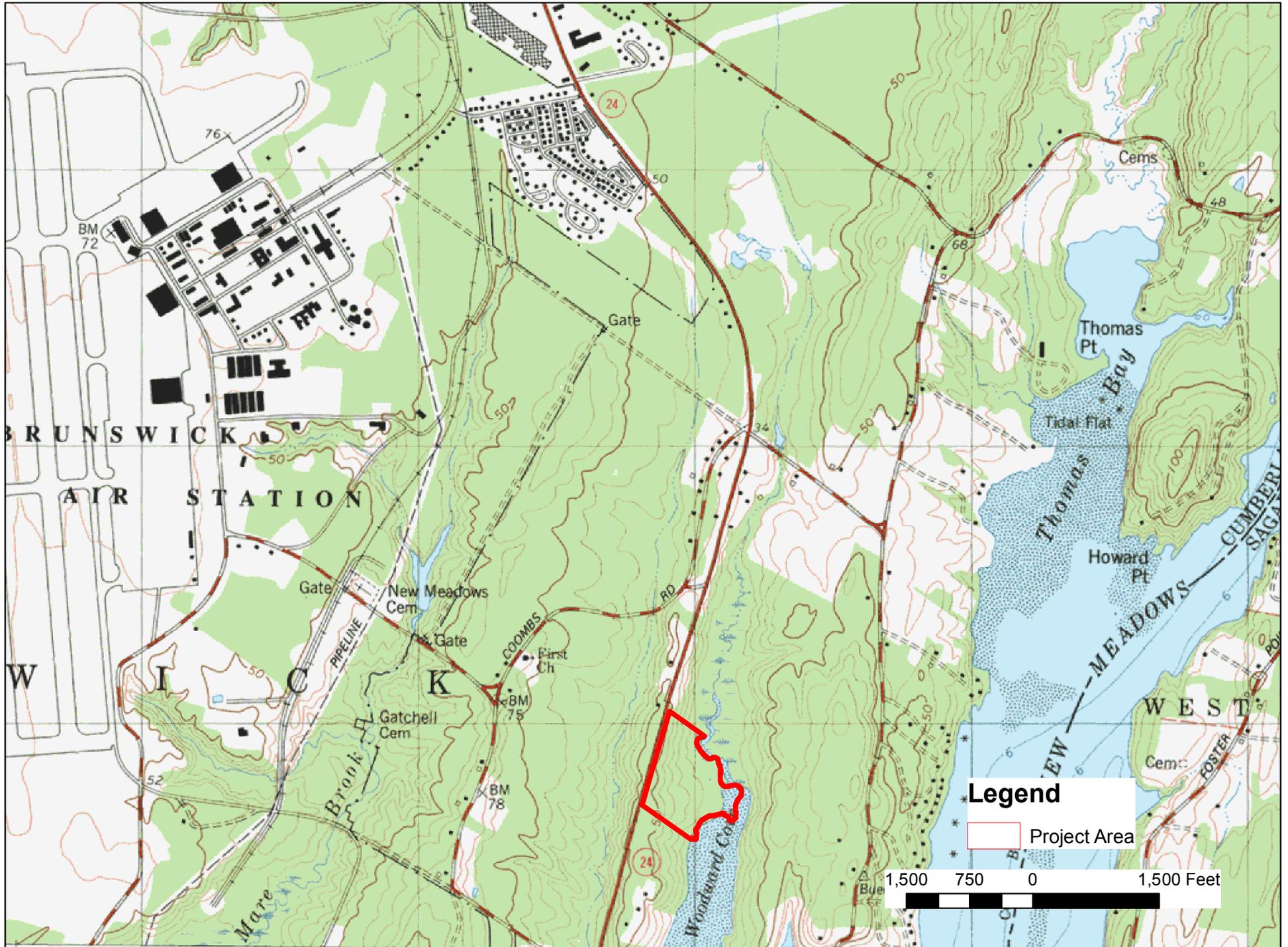
**Local Commitment**

LMF will only fund 50% of total project costs based on fair market appraised value. MCHT and BTLT are confident that the remaining 50% of the funds necessary can be secured through sources such as the Maine Outdoor Heritage Fund, the Maine Natural Resources Conservation Program, and perhaps other smaller sources.

# 2014 CELCP Proposal - Woodward Cove Preserve, Brunswick



# 2014 CELCP Proposal - Woodward Cove Preserve, Brunswick



ITEM 14

BACK UP MATERIALS

TOWN GOVERNMENT INVOLVED



**Town of Brunswick, Maine**

INCORPORATED 1739  
OFFICE OF THE TOWN MANAGER

DONALD H. GERRISH, MANAGER

28 FEDERAL STREET  
BRUNSWICK, MAINE 04011  
TELEPHONE 725-6659  
FAX # 725-6663

April 18, 2001

Mr. Edmund Benedikt  
45 Harding Road  
Brunswick, ME 04011

Dear Mr. Benedikt:

I wanted to let you know that I have appointed you to be the Town's representative to the NASB Hazardous Waste Technical Review Committee. I appreciate your willingness to serve the Town in this capacity, and invite you to call if you have any questions or concerns.

Sincerely,

Donald H. Gerrish  
Town Manager  
Town of Brunswick

CC: Brunswick Town Council  
Commander Keith Koon, NASB

Suzanne L. Johnson, Esq.  
195 Harding Road  
Brunswick, ME 04011

January 15, 2014

Benet Pols, Esq.  
Brunswick Town Councilor  
5 Columbia Ave.  
Brunswick, ME 04011

Dear Benet:

With the current transitions occurring in the Town Government, I am writing to notify you of my request to terminate my appointment as the Town of Brunswick's Representative to the Restoration Advisory Board ("RAB") overseeing the superfund cleanup work at the former Naval Air Station - Brunswick. The appointment is not one listed among the numerous town committees, in part because the position arises as a function of the requirements of Federal statute, which requires creation of a citizen group to participate in and oversee cleanup efforts on Federal property. The Towns of Brunswick, Harpswell and Topsham all have appointed citizen representatives to the RAB.

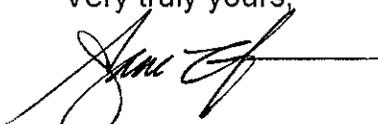
As you know, the Federal Environmental Protection Agency funds the payment of a technical advisor, who in our case is a hydrogeologist with decades of experience at the Brunswick facility. Our expert has participated alongside Navy contractors and State DEP and Federal EPA regulators since the inception of superfund designations at the multiple sites on the Navy property. The citizen group has ensured all documentation regarding every site on the property has been placed on file at the Curtis Memorial Library. The citizens have provided active commentary on cleanup efforts, and ensured a public and open process regarding the complex nature of toxic and hazardous contamination issues.

Work continues and requires continuing oversight and participation by the citizen group. Given my many years of participation as the Town's representative I am acutely aware of the technical expertise and knowledge of the Base and ongoing cleanup efforts that is needed by anyone seeking to represent the citizen interest in this property. Fortunately, I am able to inform you that David S. Page, the Pickard Professor of Chemistry and Biochemistry Emeritus from Bowdoin College has agreed to fill this role. I have attached David's CV with this letter. You will note his expertise in Environmental Damage Assessment and Ecological

Risk Assessment, along with aquatic and sediment toxicology make him uniquely suited to this role. This is particularly important where the former Navy Air Station will continue to have groundwater contamination concerns for our lifetime. David has been an active participant with the citizen group reviewing technical data and providing commentary for several years now.

Please let me know how you wish to proceed. I frankly can't remember the year of my initial appointment, which was put forward by then Town Manager Don Gerrish. I will continue my participation with the citizen group, but feel it is time for a new representative to be appointed by the Town.

Very truly yours,

A handwritten signature in black ink, appearing to read "Suzanne L. Johnson", with a horizontal line extending to the right.

Suzanne L. Johnson

SLJ:kds

Enclosure

cc: David Page

## Biographical Sketch

### DAVID S. PAGE

Charles Weston Pickard Professor of Chemistry and Biochemistry Emeritus, Bowdoin College  
Brunswick, Maine 04011 USA

Dr. Page is the Charles Weston Pickard Professor of Chemistry and Biochemistry Emeritus at Bowdoin College in Brunswick, Maine. His responsibilities included teaching students courses in chemistry and in biochemistry, and conducting research in the area of marine environmental pollution studies. He has also been a visiting scientist at the Skidaway Institute for Oceanography, Savannah, Georgia, and the Plymouth Marine Laboratory, Plymouth, England.

Dr. Page has more than 130 professional publications, most dealing with various aspects of the fate and effects of petroleum and other pollutants on marine environments as well as two biochemistry texts and 11 articles on chemical education. Since 1974, he has conducted interdisciplinary studies on the fate and effects of oil spills on natural communities of animals and plants including ways in which to measure sub-lethal pollutant stress on plants and animals. Because oil spills occur in real-world environments, the presence of other natural and human factors have resulted in studies of the fate and effects of other pollutants such as heavy metals and alkyltins. Recent scholarly work has involved studying the mechanisms of toxic action of tributyltin on marine mussels in collaboration with colleagues at the Plymouth Marine Lab, UK and the University of the District of Columbia. Major oil spill studies include those from the following vessels; *Tamano*, *Zoe Colocotroni*, *New Concord*, *Amoco Cadiz*, *Exxon Valdez*, and many other smaller spills.

Dr. Page has served as an environmental consultant and testimonial expert in a variety of oil spill-related cases involving environmental damages including the *Zoe Colocotroni*, *Amoco Cadiz*, *Exxon Valdez*, (State and Federal) and Mobil Producing Nigeria IDOHO-QIT litigations. In all cases, this involved participation in environmental injury assessment studies and the evaluation of the injury claims and scientific work of others. He has also served as an expert in litigation for a variety of other cases not involving oil spills.

He is a member of the Society of Environmental Toxicologists and Chemists (SETAC), a member of the Board of the North Atlantic Chapter of the Society of Environmental Toxicologists and Chemists (NACSETAC), a member of the International Society of Environmental Forensics, a member of the Gulf of Maine Council, Gulfwatch Contaminants Committee, a member of the Gulf of Maine Council Ecosystem Indicator Partnership Contaminants Sub-committee, a member of the American Chemical Society and is an Executive Committee and member of the board of the Dose Response Society. He earned his undergraduate degree in chemistry from Brown University in 1965 and his doctorate in physical chemistry from Purdue University in 1970.

David S. Page  
Professor of Chemistry and Biochemistry Emeritus Bowdoin College  
29 Magean St  
Brunswick, Maine 04011 USA  
Phone: (207) 729-4364  
Email: [dpage@bowdoin.edu](mailto:dpage@bowdoin.edu)  
Websites: <http://academic.bowdoin.edu/faculty/D/dpage/>  
<http://www.dspage.com>  
<http://www.valdezsciences.com>

## Areas Of Expertise

- Environmental Damage Analysis
- Oil Spill Planning, Response and Assessment of Impacts on the Environment
- Ecological Risk Assessment
- Fate and Transport Analysis
- Aquatic Toxicology
- Sediment Toxicology
- Water Quality, Toxics, and Toxicity Studies
- Natural Resource Damage Assessment (NRDA)

## Litigation Experience

### Trial Work as Expert Witness in Oil Spill-Related Cases

November-December 1977: US District Court (District of Puerto Rico) Civ. 252-73 The Commonwealth of Puerto Rico and the Environmental Quality Board of the Commonwealth of Puerto Rico (plaintiffs) v. The SS Zoe Colocotroni, her engines, appurtenances, etc., et al., (defendants). [On behalf of defendants: West of England Shipowners Mutual Protection and Indemnity Association (UK): Law firms Freehill, Hogan & Mahar; Donovan, Leisure, Newton and Irvine]. Conducted major environmental impact study and testified on fate and effects of the spilled oil and extent of environmental damages and validity of plaintiff claims.

January 1980: US Environmental Protection Agency adjudicatory hearing (Boston, MA) on Pittston Company appeal of an EPA decision to deny a water quality permit for a proposed refinery. [On behalf of Pittston Co.]

February-March 1987: US District Court (Chicago, Illinois) In Re Oil Spill by the AMOCO CADIZ Off the Coast of France on March 16, 1978. [On behalf of defendants AMOCO Transport Inc.: Law Firm Kirkland and Ellis]. Conducted major environmental impact study and testified on fate and effects of the spilled oil and extent of environmental damages and validity of plaintiff claims.

July 1994: US District Court (Anchorage, Alaska) In Re Exxon Valdez Oil Spill: Phase 2 of Federal Damages Trial. [On behalf of defendants Exxon USA: Law firm O'Melveny and Myers]. Conducted major environmental impact study and testified on fate and effects of the spilled oil and extent of environmental damages and validity of plaintiff claimss.

August 1994: State of Alaska Superior Court (Anchorage, Alaska) In Re Exxon Valdez Oil Spill: State Court Damages Trial. [On behalf of defendants Exxon USA: Law firm O'Melveny and Myers; Bogle and Gates]. Conducted major environmental impact study and testified on fate and effects of the spilled oil and extent of environmental damages and validity of plaintiff claims as related to land value damages.

May 2002 – July 2006: IDOHO oil spill litigation (on behalf of defendants), Various Federal and State courts, Nigeria including: Tosanwunmi Arthur v. MPNU, Federal High Court, Benin City, Nigeria, March, 2004: Shelly Okosugba v. MPNU, Federal High Court, Lagos, Nigeria, July, 2006: Kudehinbu v. MPNU, Federal High Court, Lagos, Nigeria, July, 2006. Conducted major environmental impact study and testified on fate and effects of the spilled oil and extent of environmental damages and validity of plaintiff damage claims.

**Numerous other cases that did not go/have not yet gone to trial including:**

September 1989-Current: Exxon Valdez Oil Spill Litigation Support (On behalf of defendants Exxon USA: Law firm O'Melveny and Myers/Exxon Mobil). Worked with attorneys and ExxonMobil staff to conduct field studies of the fate and effects of the spill and to advise and prepare publications to deal with various aspects of plaintiff and Government claims.

January 1991-March 1992: MV Presidente Rivera oil Spill natural resources damages litigation support (on behalf of defendants). Freehill, Hogan and Mahar, NY, NY; Krusen, Evans, and Byrne, Philadelphia, PA). Work resulted in settlement with Federal/State Trustees.

July, 1989: MV Glacier Bay oil spill, Kenai, Alaska) natural resources damages litigation support (on behalf of defendants). Freehill, Hogan and Mahar, NY,). Work resulted in settlement.

May, 2000 – September 2007: Natural Resources Defence Council vs Motiva vs. Texaco Refining and Marketing Inc. (on behalf of defendants; Wallace King Domike and Reiskin PLLC). Retained on behalf of Motiva (Texaco) Enterprises, LLC to provide litigation support and provide expert opinions with respect to studies performed and contributed to relating to environmental issues at the former Motiva Delaware City Refinery and Delaware River Estuary.

May 2008- October 2008: Durbin v. Flavorchem Corp. et al.; Flemings v. Flavorchem Corp. et al. (on behalf of defendant Danisco Inc.; Goldberg Kohn Bell Black Rosenbloom & Moritz, Ltd.) Provided litigation support and expert opinions with respect to studies performed by plaintiff experts.

**Other recent Expert Work Completed**

August 2003 – February 2004: State of Maine Dioxin Monitoring Program Review. (Maine Department of Environmental Protection) Headed a team of scientists that performed an independent review of the scientific validity of the (then) current river dioxin monitoring program.

**See Also Major Reference Projects Section of Current CV.**

## Oil Spill Experience

1971-1980	Pipeline break, Searsport, Maine.
1972-1977	<u>MV TAMANO</u> , Casco Bay, Maine.
1976	<u>MV ARGO MERCHANT</u> , Georges Bank, USA.
1977	<u>MV NORTHERN GULF</u> , Friendship, Maine.
1977-1981	<u>MV ZOE COLOCOTRONI</u> , Puerto Rico.
1978	<u>B-100</u> , New York.
1978	<u>B-105</u> , New Hampshire.
1978	<u>IOT-250</u> , Rhode Island.
1978	<u>MV HOWARD STAR</u> , Tampa, Florida.
1978	Natural Oil Seep - Canadian Arctic.
1978-1995	<u>MV AMOCO CADIZ</u> , Brittany, France.
1979-1980	<u>MV NEW CONCORD</u> , New Hampshire, USA.
1980-1990	Tidal Area Dispersant Project, Searsport, Maine (Test Spills).
1981	<u>Funiwa-5 Blowout</u> , Nigeria.
1982-1987	Baffin Island Oil Spill Project (Experimental Spills).
1987	<u>MV GLACIER BAY</u> , Cook Inlet, Alaska.
1989-present	<u>MV EXXON VALDEZ</u> , Prince William Sound, Alaska.
1989-94	<u>MV PRESIDENTE RIVERA</u> , Delaware River.
1998-2008	Idoho-QIT Oil Spill, Nigeria

## Major Reference Projects

*Effects of Tamano Spill on the Marine Environment*, State of Maine Department of Marine Resources Contract DMR 5-75, D.W. Mayo, D.S. Page, and E.S. Gilfillan, Bowdoin College

This study was conducted between 1972 and 1976 and was designed as a multidisciplinary program to study the fate and effects of the Tamano oil spill in Casco Bay, Maine in support of natural resource damage claims by the State of Maine. The chemistry program was closely coordinated with biological sampling of commercially important bivalve species. Physiological studies were conducted to determine the extent to which given body burdens of petroleum decreased the productivity of bivalve resources in the spill zone. The results were used as a basis for compensation claims. The chemistry principal investigators were Dr. D. S. Page and Dr. D.W. Mayo and the biology/physiology principal investigator was Dr. E. S. Gilfillan.

*Comprehensive Study of Petroleum Hydrocarbons in the Marine Environment at Long Cove, Searsport Maine--An Ecological, Physiological, Chemical and Histopathological Survey*.

Maine Department of Environmental Protection Contract #906439, E.S. Gilfillan, S.A. Hanson, D.S. Page, D.W. Mayo, J. Cooley (Bowdoin College), J. Chalfant, T. Archambeault, A. West (Maritec), and J.C. Harshbarger (Smithsonian Institution), (1977)

This study was conducted between 1976 and 1977 and was designed as a multidisciplinary program to study the fate and effects of a pipeline break of jet fuel that

impacted productive shellfish areas in Long Cove, Searsport, Maine. This study included the following elements that were conducted in a concurrent, coordinated manner: Sediment and clam tissue hydrocarbon chemistry; clam physiology; shellfish population densities; shellfish histopathology; reduction in standing clam crop and monetary damage calculation. The chemistry program was closely coordinated with biological sampling of commercially important bivalve species. Physiological studies were conducted to determine the extent to which given body burdens of petroleum decreased the productivity of bivalve resources in the spill zone. The results were used as a basis for compensation claims. The chemistry principal investigator was Dr. D. S. Page and the biology/physiology principal investigator was Dr. E. S. Gilfillan.

### **Zoe Colocotronis Oil Spill NRDA**

Beginning in 1977, the Bowdoin Group conducted an extensive field sampling program and laboratory analytical program to provide information on the fate and effects of a tropical oil spill in support of litigation. The Bowdoin Group extensively reviewed and critiqued the results of studies of other contractors as part of the work program. The chemistry program (D. S. Page) tracked the fate of the petroleum by capillary gas chromatography and an infaunal biology program (E. S. Gilfillan) tracked the effects of the spill through biological community structure analysis. The effects of petroleum on mangrove trees were also measured by measuring the salt balance in the trees' tissues. The Bowdoin Group included other variables such as sediment salinity and temperature in the study plan. Salinity was found to be the major cause of stress in the spill zone. The study continued through 1981. The chemistry principal investigator was Dr. D. S. Page and the biology/physiology principal investigator was Dr. E. S. Gilfillan.

### **Tidal Area Dispersant Project: Fate and Effects of Chemically Dispersed Oil in the Nearshore Benthic Environment.**

1980-1983, funded by the American Petroleum Institute. This multidisciplinary project involved the establishment of two test areas and a control area at a location on the Maine coast at which test spills of dispersant-treated and non-dispersed oil were conducted. Pre-spill baseline studies were conducted prior to the spills. Monitoring of dispersed oil in water was done at the time of the spills. Injury assessment and oil fate measurements were conducted for 2 years after the test oil spills. The study design was a random matrix design for the inter-tidal zone stations and fixed subtidal stations. Benthic sediment sampling for chemistry and infaunal biology and shellfish was done concurrently. The chemistry principal investigator was Dr. D. S. Page and the biology/physiology principal investigator was Dr. E. S. Gilfillan. A member of the Bowdoin Group (E. S. Gilfillan) later used the results of this study to prepare dispersant use guidelines for the State of Maine.

### **Amoco Cadiz Oil Spill NRDA Study Program: 1979-1986**

This multi-year project was done in support of litigation. This consisted of an integrated program of chemistry and biology sampling in the field to establish the effects of the spill on the commercial oyster fishery and to compare those effects with those of other sources of pollutants measured in the spill zone including sewage and heavy metals. Sediment and oil samples were taken in the field for hydrocarbon analysis to determine the rate of oil loss at a site and for fingerprinting of other sources of petroleum. The Bowdoin Group extensively reviewed and critiqued the results of studies of other contractors as part of the work program. The

chemistry principal investigator was Dr. D. S. Page and the biology/physiology principal investigator was Dr. E. S. Gilfillan.

### **Exxon Valdez Oil Spill Shoreline Ecology Program; 1990-1999**

This was a major, multi-year program designed to measure the fate and effects of the Exxon Valdez oil spill on shoreline biological communities in Prince William Sound and the Gulf of Alaska. The Bowdoin Group is part of a team of investigators supported by Exxon USA to conduct injury assessment studies as the operational part of the EXXON NRDA and Litigation Support programs. The Bowdoin Group was responsible for the study design of the field programs and the data analysis of biological and chemical data obtained from field programs conducted in 1990, 1991, 1993, 1998 and 1999. In addition to relating chemical results to biological effects, analysis of chemical data was done to determine non-spill petroleum sources. These results were related to biological community health and spill recovery. As part of the litigation process, the Bowdoin Group extensively reviewed and critiqued the results of studies of other contractors across many disciplines as part of the work program. The chemistry principal investigator was Dr. D. S. Page and the biology/physiology principal investigator was Dr. E. S. Gilfillan

### **Description of Professional Relationship**

Dr. Page is the Charles Weston Pickard Professor of Chemistry and Biochemistry Emeritus at Bowdoin College in Brunswick, Maine. Bowdoin College is a private co-educational liberal arts college, currently ranked in the top 10 group of private selective undergraduate colleges in the United States. As an independent consultant, his opinions and activities are his own and do not reflect Bowdoin College policy or practice.

## VITA

David S. Page, Ph.D.  
Phone: (207) 729-4364 Email: dpage@bowdoin.edu  
Charles Weston Pickard Professor of Chemistry and Biochemistry Emeritus, Bowdoin College  
29 Magean St., Brunswick, Maine 04011 USA

### EDUCATION:

B.S. 1965	Brown University (Chemistry).
Ph.D. 1970	Purdue University. (Chemistry: dissertation title: "The Reduction Mechanism of L-Amino Acid Oxidase." with R.L. Van Etten).
1970-1971	Visiting Assistant Professor, Purdue University.
1971-1974	Assistant Professor of Chemistry, Bates College
1974	Assistant Professor of Chemistry and Biochemistry, Bowdoin College.
1975	Associate Professor of Chemistry and Biochemistry, Bowdoin College.
1981	Visiting Scientist, Skidaway Institute of Oceanography (University of Georgia), Savannah, GA
1982	Professor of Chemistry and Biochemistry, Bowdoin College.
1987-88	Visiting Scientist Plymouth Marine Laboratory Plymouth, UK
1994-95	Visiting Scientist Plymouth Marine Laboratory Plymouth, UK
1998-2008	Charles Weston Pickard Professor of Chemistry and Biochemistry
2002	Visiting Scientist, Skidaway Institute of Oceanography (University of Georgia), Savannah, GA
2008	Charles Weston Pickard Professor of Chemistry and Biochemistry Emeritus

### PUBLICATIONS IN CHRONOLOGICAL ORDER BY CATEGORY

#### Papers in Refereed Journals

- F.R. Duke, M.K. Weibel, D.S. Page, V.C. Bulgrin, and J.A. Luthy, "The Glucose Oxidase Mechanism," *J. Am. Chem. Soc.* **91**, 3904 (1969).
- D.S. Page and R.L. Van Etten, "pH Dependent Deuterium Isotope Effects in the L-Amino Acid Oxidase-L-Leucine Kinetic System." *Biochim. et. Biophys. Acta* **191**, 190 (1969).
- D.S. Page and R.L. Van Etten, "L-Amino Acid Oxidase: I. The Effect of pH." *Biochim. et Biophys. Acta*, **191**, 38 (1969).
- D.S. Page and R.L. Van Etten, "Deuterium Isotope Effects and the Action Mechanism for the Reduction of L-Amino Acid Oxidase by L-Leucine," *Biochim. et Biophys. Acta*, **227**, 16 (1971).
- D.S. Page and R.L. Van Etten, "Substrate Substituent Effects Upon the Reaction of L-Amino Acid Oxidase with Phenylalanines," *BioOrganic Chemistry* **1**, 361 (1971).

- E.S. Gilfillan, D.W. Mayo, D.S. Page, D. Donovan, and S. Hanson (1977) "Effects of Varying Concentrations of Petroleum Hydrocarbons in Sediments on Carbon Flux in *Mya Arenia*," in *Physiological Responses of Marine Biota to Pollutants*, F.J. Vernberg, et al. editors, Academic Press, N.Y.
- D.W. Mayo, D.S. Page, J. Cooley, E. Sorenson, F. Bradley, E. Gilfillan and S.A. Hanson, "Weathering Characteristics of Petroleum Hydrocarbons Deposited in Fine Clay Marine Sediments, Searsport, Maine," *J. Fisheries Res. Bd. Can.* 35, 5 (1978).
- D.S. Page, D.W. Mayo, J.F. Cooley, E. Sorenson, E.S. Gilfillan and S.A. Hanson, "Hydrocarbon Distribution and Weathering Characteristics at a Tropical Oil Spill Site, Proceedings of 1979 Oil Spill Conference, EPA/API/USCG pp. 709-712.
- D.S. Page, E.S. Gilfillan, E. Sorenson and J.F. Cooley, Bowdoin College HRC and MRL. J. Glasgow, Maine Department of Environmental Protection, "Restoration of an Oil Impacted Intertidal Sediment by Direct Application of a Dispersing Agent," Proceedings of: Chemical Dispersion of Oil Spills--an International Symposium, Toronto, Canada, November 17-19, 1980. Institute for Environmental Studies University of Toronto Pub. No. EE-17 (1980).
- D.S. Page, B.T. Page, J.R. Hotham, E.S. Gilfillan and R.P. Gerber, "Bioavailability of Toxic Constituents of Used Drilling Muds," in Proceedings: Research on Environmental Fate and Effects of Drilling Fluids and Cuttings, January 21-24, 1980, API/BLM/DOE/EPA/USGS/NOAA (1980).
- R.P. Gerber, E.S. Gilfillan, B.T. Page, D.S. Page and J.R. Hotham, "Short and Long Term Effects of Used Drilling Fluids on Marine Organisms," in Proceedings: Research on Environmental Fate and Effects of Used Drilling Fluids and Cuttings, January 21-24, 1980, API/BLM/DOE/EPA/USGS/NOAA (1980).
- D.S. Page, J.F. Cooley, J.R. Hotham and E.S. Gilfillan, "Weathering of Petroleum Under Tropical Conditions." Proceedings of Coastal Ecosystems Workshop, US Fish & Wildlife Service, Big Pine Key, Florida (1980).
- E.S. Gilfillan, R.P. Gerber and D.S. Page, "Effects of the Zoe Colocotronis Oil Spill on Infaunal Communities Associated with Mangroves." Proceedings of Coastal Ecosystems Workshop, US Fish & Wildlife; Big Pine Key, Florida (1980).
- E.S. Gilfillan, D.S. Page, R.P. Gerber, S.A. Hanson, J.F. Cooley and J.R. Hotham, "Fate of the Zoe Colocotronis Oil Spill and its Effects on Infaunal Communities Associated with Mangroves," in Proceedings: 1981 Oil Spill Conference, March 2-5, 1981. API Publication No. 4334 pp. 353-360, (1981).
- R.F. Lee, S.C. Singer and D.S. Page, "Responses of Cytochrome P-450 Systems in Marine Crab and Polychaetes to Organic Pollutants," *Aquatic Toxicology*, 1 (1981), 355-365.
- R.F. Lee, J.W. Conner, D.S. Page, L.F. Ray and C.S. Giam, "Cytochrome P-450 Dependent Mixed Function Oxygenase Systems in Marsh Crabs," In: *Physiological Mechanisms of Marine Pollutant Toxicity*. Edited by Winona B. Vernberg, Anthony Calabrese, Frederick P. Thurberg and F. John Vernberg. Academic Press, pp. 146-159, (1982).

- E.S. Gilfillan, D.S. Page, S.A. Hanson, J.C. Foster, J.R. Hotham, D. Vallas and R.P. Gerber, "Effects of Spills of Dispersed and Non-Dispersed Oil on Intertidal Infaunal Community Structure," in Proceedings: 1983 Oil Spill Conference, February 28-March 3, 1983. American Petroleum Institute, Washington, D.C. pp. 457-464 (1983).
- D.S. Page, E.S. Gilfillan, J.C. Foster, J.R. Hotham, D. Vallas, S.A. Hanson, E. Pendergast and L. Gonzalez, "Long Term Fate of Dispersed and Undispersed Oil in Two Nearshore Test Spills," in Proceedings: 1983 Oil Spill Conference, February 28- March 3, 1983. American Petroleum Institute, Washington, D.C. pp. 465-471 (1983).
- E.S. Gilfillan, David S. Page, J.C. Foster, D. Vallas, L. Gonzalez, A. Luckerman, J.R. Hotham, E. Pendergast and S. Hebert. "A Comparison of Stress Indicators at the Biological, Organismal and Community Level of Organization. *Marine Environmental Research* 14, (1984) 503-504.
- D.S. Page, E.S. Gilfillan, S.A. Hanson, J.R. Hotham and J.C. Foster, "Correlation of Body Burden of Heavy Metals with Physiological Stress Indicators in *Mytilus edulis* and *Mya arenaria* Exposed to Heavy Metals in the Field," *Marine Environmental Research* 14, (1984), 505.
- D.S. Page, E.S. Gilfillan, J.C. Foster, J.R. Hotham, D. Vallas, S.A. Hanson, and R.P. Gerber, "Tidal Area Dispersant Project: Fate of Dispersed and Undispersed Oil in Two Nearshore Test Spills. In: Tom E. Allen ed. *Oil Spill Chemical Dispersants, Research, Experience and Recommendations* 465 pp., American Society for Testing Materials, Philadelphia, PA, (1984), pp. 280-298.
- E.S. Gilfillan, D.S. Page, S.A. Hanson, J. Foster, J. Hotham, D. Vallas, and R. Gerber, "Effects of Test Spills of Dispersed Oil and Non-Dispersed Oil on Metabolic Pathways in Two Intertidal Bivalves, *Mya arenaria* and *Mytilus edulis*." In: Tom E. Allen ed. *Oil Spill Chemical Dispersants, Research, Experience and Recommendations* 465 pp., American Society for Testing Materials, Philadelphia, PA, (1984), pp. 299-313.
- D.S. Page, E.S. Gilfillan, J.C. Foster, E. Pendergast, L. Gonzalez and D. Vallas. "Compositional Changes in Dispersed Crude Oil in the Water Column During a Nearshore Test Spill." In: Proceedings of the 1985 Oil Spill Conference, American Petroleum Institute, Washington, D.C., (1985), pp. 521-530.
- E.S. Gilfillan, D.S. Page, S.A. Hanson, J. Foster, J. Hotham, D. Vallas, E. Pendergast, S. Hebert, S.D. Pratt and R. Gerber. Tidal Area Dispersant Experiment, Searsport, Maine: An Overview. In: Proceedings of the 1985 Oil Spill Conference, American Petroleum Institute, Washington, D.C., (1985) pp. 553-560.
- D.S. Page, E.S. Gilfillan, J.C. Foster, J.R. Hotham and L. Gonzalez, "Mangrove Leaf Tissue Sodium and Potassium Ion Concentrations as Sublethal Indicators of Oil Stress in Mangrove Trees." In: Proceedings of the 1985 Oil Spill Conference, American Petroleum Institute, Washington, D.C., (1985), pp. 391-393.
- D.S. Page, E.S. Gilfillan, M. Clavette, and J.C. Foster. The effect of chromium absorption and depuration on the activities of glucose-6-phosphate dehydrogenase and aspartate amino transferase in *Mytilus edulis*., *Marine Environmental Research*. 17, 284-285, (1985).

- Gilfillan, E. S., Page, D. S., Vallas, D., Gonzalez, L., Pendergast, E., Foster, J. C. and Hanson, S. A. (1985). Relationship between Glucose-6-phosphate dehydrogenase and aspartate aminotransferase activities, scope for growth and body burden of Ag, Cd, Cu, Cr, Pb and Zn in populations of *Mytilus edulis* from a polluted estuary. In *Pollution and the Physiology of Marine Invertebrates* (F. J. Vernberg, ed.), pp. 107-124. University of South Carolina Press, Columbia, SC.
- Mayo, DW, Butcher, SS, Pike, RM, Foote, CM, Hotham, JR, Page, DS. (1985) Microscale organic laboratory: II: The benefits derived from conversion to the program and representative experiments. *Journal of Chemical Education*, 62, 147-149.
- Butcher, SS, Mayo, DW, Pike, RM, Foote, CM, Hotham, JR, Page, DS. (1985) Microscale organic laboratory: I: An approach to improving air quality in instructional laboratories. *Journal of Chemical Education*, 62, 149-151
- E.S. Gilfillan and D.S. Page. Use of Multivariate Statistical Techniques to Associate Biologically Active Stressors with Observed Effects in Multiple Stressor Situations. In: *Proceedings Oceans 86 Conference*. Marine Technology Society/IEEE Ocean Engineering Society, Washington, D.C. (1986), pp. 953-959.
- E.S. Gilfillan, D.S. Page, A.E. Bass, P.M. Fickett, J.C. Foster, W.G. Ellis, S. Rusk, and C. Brown. A Comparison of Petroleum Effects on Osmoregulation in the Marine Halophytes *Zostera Marina*, *Spartinas alterniflora*, and *Rhizophora mangle*. In: J. van den Brink and J. Kuiper (eds.). *Fate and Effects of Oil in Marine Ecosystems*. Martinus Nijhoff and Dr. W. Junk Publishers, Dordrecht, Netherlands, (1987), pp. 151-158.
- D.S. Page, J.C. Foster, and E.S. Gilfillan. Kinetics of Aromatic Hydrocarbon Depuration in Oysters Impacted by the *Amoco Cadiz* Oil Spill. In: J. van den Brink and J. Kuiper (eds.). *Fate and Effects of Oil in Marine Ecosystems*. Martinus Nijhoff and Dr. W. Junk Publishers, Dordrecht, Netherlands, (1987), pp 243-252.
- E.S. Gilfillan, D.S. Page, B. Griffin, S.A. Hanson and J.C. Foster. The use of stepwise multiple regression to associate body burdens of different pollutants with effects on the physiology of *Crassostrea gigas* from the Amoco Cadiz oil spill impact zone. In: W.B. Vernberg, A. Calabrese, F.P. Thurberg, and F.J. Vernberg (eds). *Pollution Physiology of Estuarine Organisms*, University of South Carolina Press. Columbia, S.C., (1987), pp. 155-159.
- E.S. Gilfillan, D.S. Page, B. Griffin, S.A. Hanson, and J.C. Foster. (1987). The Importance of Using Appropriate Experimental Designs in Oil Spill Impact Studies: An Example from the Amoco Cadiz Oil Spill Impact Zone. In: *Proceedings of the 1987 Oil Spill Conference*, American Petroleum Institute, Washington, D.C. pp. 503-507.
- D.S. Page, J.C. Foster, P.M. Fickett, and E.S. Gilfillan. Identification of petroleum sources in an area impacted by the Amoco Cadiz Oil Spill. *Marine Pollution Bulletin* 19, (1988), pp. 107-115.
- D.S. Page. An Analytical Method for Butylin Species in Shellfish. *Marine Pollution Bulletin*, 20, (1989), pp. 129-133.
- E.S. Gilfillan, D.S. Page, A.E. Bass, J.C. Foster, P.M. Fickett, W.G. Ellis, S. Rusk, and C. Brown. Use of Na/K Ratios in Leaf Tissues to Determine Effects of Petroleum on Salt Exclusion in Marine Halophytes. *Marine Pollution Bulletin*, 20 (1989) pp. 272-276.

- D.S. Page, J.C. Foster, P.M. Fickett, and E.S. Gilfillan, Long-Term Weathering of AMOCO CADIZ Oil in Soft Intertidal Sediments, In: Proceedings of the 1989 Oil Spill Conference, American Petroleum Institute, Washington, D.C., (1989) pp. 401-406.
- J. Widdows, D. Dixon, P. Donkin, S.V. Evans, I. McFadzen, D.S. Page, P.N. Salkeld, and C.M. Worrall. Sublethal Biological Effects Monitoring in the Region of Sullom Voe Shetland. Report to the Shetland Oil Terminal Environmental Advisory Group (UK). February 1989, 21 pp.
- D.S. Page, E. S. Gilfillan, J. Foster and J. Widdows. Tributyltin in *Mytilus edulis* from Coastal Locations in Devon and Cornwall (UK) and Maine (US) and Its Effect on Shell Morphology. *Marine Environmental Research* 28 (1989) pp. 539-540.
- J. Widdows, P. Donkin and D. Page. Combined effects of structurally related and unrelated toxicants on the clearance rate of mytilus edulis. *Marine Environmental Research* 28 (1989), pp. 543-544
- E. S. Gilfillan, D. S. Page, A. E. Bass, J. C. Foster, P. M. Fickett, W. G. Ellis, S. Rusk, C. Brown, G. Trussel and C. Kresja . Use of Na/K ratios in leaf tissues to determine effects of petroleum on osmoregulation in marine halophytes. *Marine Environmental Research* 28 (1989) p. 537.
- Page, D. S. and Widdows, J., (1990) Temporal and spatial variation in levels of alkyltins in mussel tissues: A toxicological interpretation of field data. In: Proceedings of the Third International Organotin Symposium, Monaco, 17-20 April, 1990. International Atomic Energy Agency, pp. 127-131
- Page, D.S., Dassanayake, T., Gilfillan, E.S. and Kresja, C. (1990) Butyltin species in coastal Maine mussel samples. In: Proceedings of the Third International Organotin Symposium, Monaco, 17-20 April, 1990. International Atomic Energy Agency, pp. 170-175
- Page, D.S., Readman, J.W., Mee, L.D. and McCarthy, M. (1990) Mussels as indicators of butyltin contamination: a North Western Mediterranean case study. In: Proceedings of the Third International Organotin Symposium, Monaco, 17-20 April, 1990. International Atomic Energy Agency, pp. 179-184.
- J. Widdows, K.A. Burns, N.R. Menon, D.S. Page, and S. Soria. Measurement of Physiological Energetics (Scope for Growth) and Chemical Contaminants in Mussels (*Arca zebra*) Transplanted Along a Contamination Gradient in Bermuda. *Journal of Experimental Marine Biology and Ecology*, 138 (1990) 99-117.
- E.S. Gilfillan, D.S. Page, C.M. Krejsa, S.A. Hanson, J.C. Foster, G.C. Trussell, and B.S. Whalon. Use of Ordination Techniques to Follow Community Succession from Oil Impact to Recovery in the Field. *Chemistry and Ecology*, 5, 85-97, 1991.
- D.S. Page and J. Widdows. Temporal and Spatial Variation in Levels of Alkyltins in Mussel Tissues: A Toxicological Interpretation of Field Data. *Marine Environmental Research*, 32, 113-129, 1991.
- W.X. Wang, J. Widdows, and D. S. Page. Effects of organic toxicants on the anoxic energy metabolism of the mussel *Mytilus edulis*. *Marine Environmental Research* 34, 327-331, 1992.
- J. Widdows and D. S. Page. Effects of tributyltin and dibutyltin on the physiological energetics of the mussel, *Mytilus edulis*. *Marine Environmental Research*. 35, 233-249, 1993.

- D.S. Page, Boehm, P. D., Douglas, G. S. & Bence, A. E. (1993). Identification of Hydrocarbon Sources in the Benthic Sediments of Prince William Sound and the Gulf of Alaska Following the EXXON VALDEZ Oil Spill. Proceedings of the 16th Arctic and Marine Oil Spill Program (AMOP) Technical Seminar. Calgary, Alberta, Canada June 7-9, 1993. p. 45.
- D.S. Page, Boehm, P. D., Douglas, G. S. & Bence, A. E. (1993). The Natural Petroleum Hydrocarbon Background in Subtidal Sediments of Prince William Sound, Alaska. *SETAC, 14th Annual Meeting Abstract Book*, Houston, TX, Society of Environmental Toxicology and Chemistry. p. 37
- A.E. Bence, Burns, W. A., Douglas, G. S., Page, D. S. & Boehm, P. D. (1993). Hydrocarbons as Recorders of Human Activities in Sediments and Mussels from Prince William Sound and the Gulf of Alaska. *SETAC, 14th Annual Meeting Abstract Book*, Houston, TX, Society of Environmental Toxicology and Chemistry. p. 37
- W.A. Stubblefield, Pillard, D. A., Boehm, P. D. & Page, D. S. (1993). Evaluation of the Toxicity of Oil Residues in Shoreline Sediments Following the Exxon-Valdez Oil Spill. *SETAC, 14th Annual Meeting Abstract Book*, Houston, TX, Society of Environmental Toxicology and Chemistry. p. 38.
- Gilfillan, E. S., Page, D. S., Harner, E. J. Boehm, P. D. & Stoker, S. W. (1993) Monitoring Oiled Shorelines in Prince William Sound Alaska, Following the Exxon Valdez Oil Spill. *SETAC, 14th Annual Meeting Abstract Book*, Houston, TX, Society of Environmental Toxicology and Chemistry. p. 39.
- Boehm, P. D., Gilfillan, E. S., Page, D. S. & Stubblefield, W. A. (1993). Application of the sediment "triad" approach to a major oil spill assessment: The Exxon Valdez spill. *SETAC, 14th Annual Meeting Abstract Book*, Houston, TX, Society of Environmental Toxicology and Chemistry. p. 39.
- Burns, W. A., P. J. Mankiewicz, A. E. Bence, D. S. Page and K. Parker. A least squares method for allocating sediment hydrocarbons to multiple sources. *Estuarine Research Federation 13th Biennial International Conference Abstract Book*. November 12-16, 1995, Corpus Christi, TX. Texas A&M University Sea Grant College Program, College Station, TX. p. 16.
- Widdows, J., Donkin, P., Evans, S. V., Page, D. S. & Salkeld, P. N. (1995). Sublethal biological effects and chemical contaminant monitoring of Sullom Voe (Shetland) using mussels (*Mytilus edulis*). *Proc. Roy. Soc. Edinburgh*. **103B**, 99-112.
- Page, D. S., Gilfillan, E. S., Boehm, P. D. & Harner, E. J. (1995). Shoreline Ecology Program for Prince William Sound, Alaska, Following the EXXON VALDEZ Oil Spill. Part I: Methodology. In *Exxon Valdez Oil Spill: Fate and Effects in Alaskan Waters*, *ASTM Special Technical Publication # 1219* (P. G. Wells, J. N. Butler and J. S. Hughes, ed.), American Society for Testing and Materials, Philadelphia, PA. pp. 263-295.
- Boehm, P. D., Page, D. S., Gilfillan, E. S., Stubblefield, W. A. & Harner, E. J. (1995). Shoreline Ecology Program For Prince William Sound, Alaska, Following The Exxon Valdez Oil Spill. Part 2: Chemistry and Toxicology. In *Exxon Valdez Oil Spill: Fate and Effects in Alaskan Waters*, *ASTM Special Technical Publication # 1219* (P. G. Wells, J. N. Butler and J. S. Hughes, ed.), American Society for Testing and Materials, Philadelphia, PA. pp. 347-397.

- Gilfillan, E. S., Page, D. S., Boehm, P. D. & Harner, E. J. (1995). Shoreline Ecology Program for Prince William Sound, Alaska, Following the EXXON VALDEZ Oil Spill. Part 3: Biology. In *Exxon Valdez Oil Spill: Fate and Effects in Alaskan Waters*, ASTM Special Technical Publication # 1219 (P. G. Wells, J. N. Butler and J. S. Hughes, ed.), American Society for Testing and Materials, Philadelphia, PA. pp. 398-443.
- Gilfillan, E. S., Suchanek, T. H., Sloan, N. A., Page, D. S. & Boehm, P. D. (1995). Shoreline Impacts in the Gulf of Alaska Region Following the EXXON VALDEZ Oil Spill. In *Exxon Valdez Oil Spill: Fate and Effects in Alaskan Waters*, ASTM Special Technical Publication # 1219 (P. G. Wells, J. N. Butler and J. S. Hughes, ed.), American Society for Testing and Materials, Philadelphia, PA. pp. 263-295. pp. 444-481.
- Page, D. S., Boehm, P. D., Douglas, G. S. & Bence, A. E. (1995). Identification of Hydrocarbon Sources in the Benthic Sediments of Prince William Sound and the Gulf of Alaska Following the EXXON VALDEZ Oil Spill. In *Exxon Valdez Oil Spill: Fate and Effects in Alaskan Waters*, ASTM Special Technical Publication # 1219 (P. G. Wells, J. N. Butler and J. S. Hughes, ed.), American Society for Testing and Materials, Philadelphia, PA. pp. 41-83.
- Page, D. S., Dassanayake, T. M. & Gilfillan, E. S. (1995). Tissue distribution and depuration of tributyltin for field exposed *Mytilus edulis*. *Marine Environmental Research*. **40**, 409-421.
- Gilfillan, E. S., Maher, N. P., Kresja, C. M., Lanphear, M. E., Ball, C. D., Meltzer, J. B. and Page, D. S. (1995). Use of remote sensing to document changes in marsh vegetation following the AMOCO CADIZ oil spill (Brittany, France, 1978). *Marine Pollution Bulletin* **30**, 780-787.
- Page, D. S. (1995). A six-year monitoring study of tributyltin and dibutyltin in mussel tissues from the Lynher River, Tamar Estuary, UK. *Marine Pollution Bulletin*. **30**, 746-749
- Page, D. S., Ozbal, C. C., and Lanphear, M. E. (1996). Concentration of butyltin species in sediments associated with shipyard activity. *Environmental Pollution*. **91**, 237-243.
- Page, D. S., Dassanayake, T. M. & Gilfillan, E. S. (1996). The Relationship Between Tissue Concentrations of Tributyltin and Shell Morphology in Field Populations of *Mytilus edulis*. *Bulletin of Environmental Contamination and Toxicology* **56**, 500-504.
- Page, D. S., Boehm, P. D., Douglas, G. S., Bence, A. E. Burns, W. A. and Mankiewicz, P. J. (1996). The Natural Petroleum Hydrocarbon Background in Subtidal Sediments of Prince William Sound, Alaska. *Environmental Toxicology and Chemistry*. **15** (8), 1266-1281.
- Boehm, P. D., Mankiewicz, P. J., Hartung, R., Neff, J. M., Page, D. S., Gilfillan, E. S., O'Reilly, J. E. and Parker, K. R. (1996). Characterization of Mussel Beds with Residual Oil and the Risk to Foraging Wildlife 4 Years after the Exxon Valdez Oil Spill. *Environmental Toxicology and Chemistry*. **15** (8), 1289-1303.
- Page, D. S., Boehm, P. D., Gilfillan, E. S., Bence, A. E., Burns W. A. and Mankiewicz, P. J. Effects of the Exxon Valdez Oil Spill on the Subtidal Organic Geochemistry of Two Bays in Prince William Sound, Alaska. Proceedings of the 19th Arctic and Marine Oil Spill Program (AMOP) Technical Seminar. Calgary, Alberta, Canada June 12-14, 1996. pp. 1195-1209.

- Burns, W. A., Mankiewicz, P. J., Bence, A. E., Page, D. S. & Parker, K. R. (1997). A principal component and least-squares method for allocating sediment polycyclic aromatic hydrocarbons in sediment to multiple sources. *Environ. Toxicol. Chem.* **16** (6), 1119-1131.
- Page, D.S., E. S. Gilfillan, P.D. Boehm, A. E. Bence, W. A. Burns and P. J. Mankiewicz. Benthic Effects of the *Exxon Valdez* Oil Spill on Two Bays in Prince William Sound, Alaska. *SETAC, 17th Annual Meeting Abstract Book*, Society of Environmental Toxicology and Chemistry 17-21 November, 1996 Washington, D.C. p. 30
- Boehm, P. D., Douglas, G. S., Burns, W. A., Mankiewicz, P. J., Page, D. S. and Bence, A. E. (1997). Advances in petroleum hydrocarbon chemical fingerprinting and allocation techniques after the *Exxon Valdez* oil spill. *Marine Pollution Bulletin.* **34**(8), 599-613.
- Page, D. S., Boehm, P. D., Douglas, G. S., Bence, A. E. Burns, W. A. and Mankiewicz, P. J. (1997). An estimate of the annual input of natural petroleum hydrocarbons to seafloor sediments in Prince William Sound, Alaska. *Marine Pollution Bulletin* **34**(9), 744-749.
- Phelps, H.L. and Page, D.S. (1997) Tributyltin biomonitoring in Portuguese estuaries with the Portuguese oyster (*Crassostrea angulata*). *Environmental Technology* **18**, 1269-1276.
- Lee, R. F. and D. S. Page. (1997) Petroleum hydrocarbons and their effects in subtidal regions after major oil spills. *Marine Pollution Bulletin.* **34**(11), 928-940.
- Page, D. S., Widdows, J., and Staff, F. J. (1998). Effects of Thermal Stress and Tri(n)Butyl Tin on Anaerobic Energy Metabolism in *Mytilus Edulis*. *Marine Environmental Research*, **46**, 433-437.
- Boehm, P. D., Page, D. S., Gilfillan, E. S., Bence, A. E., Burns, W. A. & Mankiewicz, P. J. (1998). Study of the fates and effects of the *Exxon Valdez* oil spill on benthic sediments in two bays in Prince William Sound, Alaska. I: Study design, chemistry and source fingerprinting. *Environmental Science and Technology* **32**(5) 567-576.
- Page, D. S., Boehm, P. D., Douglas, G. S., Bence, A. E. Burns, W. A. and Mankiewicz, P. J. (1998). Petroleum Sources in the Western Gulf of Alaska/Shelikoff Strait Area. *Marine Pollution Bulletin.* **36**(12), 1004-1012.
- Page, D. S., Boehm, P. D., Douglas, G. S., Bence, A. E., Burns, W. A. & Mankiewicz, P. J. (1998) Source of Polynuclear Aromatic Hydrocarbons in Prince William Sound, Alaska, USA, Subtidal Sediments. *Environmental Toxicology and Chemistry* **17**(9), 1651-1652.
- Page, D. S., Boehm, P. D., Douglas, G. S., Bence, A. E., Burns, W. A. & Mankiewicz, P. J. (1999). Pyrogenic polycyclic aromatic hydrocarbons in sediments record past human activity: A case study in Prince William Sound Alaska. *Mar. Pollut. Bull.* **38**(4), 247-260.
- Page, D. S., Gilfillan, E. S., Neff, J.M., Stoker, S. W. and Boehm, P. D., (1999). 1998 Shoreline Conditions in the *Exxon Valdez* Oil Spill Zone in Prince William Sound. In: Proceedings of the 1999 Oil Spill Conference March 8-11, 1999, American Petroleum Institute, Washington, D.C., 119-126.

- Olagbende, O. T., Ede, G. O., Inyang, L. E. D., Gundlach, E. R., Gilfillan, E. S. and Page, D. S. (1999). Scientific and Cleanup Response to the Idoho-QIT Oil Spill, Nigeria. *Environmental Technology*, 20. 1213-1222.
- Page, D. S., and Gilfillan, E.S. (1999) "Oil Spill Injury Assessment in the Real World." In: SETAC Special Session "Sound Science and Its Role in Today's Litigious Society." SETAC, 20th Annual Meeting Abstract Book, Society of Environmental Toxicology and Chemistry November 14-18, 1999, Philadelphia, PA. p. 129-130.
- Gilfillan, E.S., Harner, E.J., O'Reilly, J.E., Page, D.S., Burns, W.A. (1999) A Comparison of Shoreline Assessment Study Designs Used for the Exxon Valdez Oil Spill. *Marine Pollution Bulletin*. 38(5): 380-388
- Wang, Z., Fingas, M., Page, D.S. (1999) Oil Spill Identification. *J. Chromatogr., A*. 843(1-2), 369-411.
- Boehm, P. D., Douglas, G.S., Brown, J.S., Page, D. S., Bence, A. E., Burns, W. A. & Mankiewicz, P. J. (2000). Comment on "Natural Hydrocarbon Background in Benthic Sediments of Prince William Sound, Alaska: Oil vs Coal." *Environmental Science & Technology*, Vol. 34(10), 2064-2065.
- Bence, A.E., W.A. Burns, P.J. Mankiewicz, D.S. Page and P.D. Boehm, (2000) Comment on "PAH refractory index as a source discriminant of hydrocarbon input from crude oil and coal in Prince William Sound, Alaska" by F.D. Hostettler, R.J. Rosenbauer, K.A. Kvenvolden. *Organic Geochemistry* 31(9), 931-938.
- Page, D.S., Boehm, P.D., Douglas, G.S., Brown, J.S., Bence, A.E., Burns, W.A., Mankiewicz, P.J. (2000) "Mass Balance Constraints on the Sources of the Petrogenic Hydrocarbon Background in Offshore Sediments of Prince William Sound and the Gulf of Alaska." In: Proceedings of the 23rd Arctic and Marine Oil Spill Program (AMOP) Technical Seminar, Environment Canada. Vancouver, BC, Canada June 14-16, 2000. pp. 1-9
- E.S. Gilfillan, D.S. Page, J.M. Neff, K.R. Parker, P.D. Boehm. (2000) "1999 Shoreline Conditions in the Exxon Valdez Oil Spill Zone in Prince William Sound." In: Proceedings of the 23rd Arctic and Marine Oil Spill Program (AMOP) Technical Seminar, Environment Canada. Vancouver, BC, Canada June 14-16, 2000. pp. 281-294.
- Page, D.S., Gilfillan, E.S., Boehm, P.D., Stubblefield, W., Parker, K.R., Maki, A.W. (2000) "Sediment Toxicity Values for a Field Study Compared with Sediment Quality Criteria for Total PAH." SETAC, 21st Annual Meeting Abstract Book, Society of Environmental Toxicology and Chemistry 12-16 November, 2000 Nashville, TN. p.126.
- Page, D.S., Gilfillan, E.S., Boehm, P.D., Stubblefield, W.A., Parker, K.R. and Maki, A.W. (2001) Oil weathering and sediment toxicity in shorelines affected by the Exxon Valdez oil spill in Prince William Sound, Alaska. In: *Proceedings of the 2001 Oil Spill Conference*, American Petroleum Institute, Washington, D.C., 551-557.
- E. S. Gilfillan, D.S. Page, J.M. Neff, K.R. Parker, P.D. Boehm and A.W. Maki. 2001. A Ten Year Study of Shoreline Conditions in the EXXON VALDEZ Spill Zone, Prince William Sound, Alaska. In: *Proceedings of the 2001 Oil Spill Conference*, American Petroleum Institute, Washington, D.C., 559-567.

- Boehm, P.D., Page, D.S., Burns, W.A., Bence, A.E., Mankiewicz, P. J. and Brown, J.S. (2001) Resolving the Origin of the Petrogenic Hydrocarbon Background in Prince William Sound, Alaska. *Environmental Science and Technology* **35**(3), 471-479.
- Chapman, P.M., Birge, W.J., Adams, W.J., Barrick, R., Bott, T.L., Burton, A., Collier, T.K., Cumberland, H.L., Douglas, W.S., Johnson, L.L., Luther, G.W., O'Connor, T., Page, D.S., Sibley, P., Standley, L.J., Wenning, R.J. (2001) Sediment Quality Values (SQVs) – Challenges and Recommendations. *SETAC Globe* **2** (2), 24-26.
- Page DS\*, Boehm PD, Douglas GS, Bence AE, Burns WA, Mankiewicz PJ (2001) "The Application of Chemistry to Defining the Fate, Effects and Sources of Hydrocarbons in the Exxon Valdez Spill Zone in Prince William Sound, Alaska." *SETAC, 22nd Annual Meeting Abstract Book*, Society of Environmental Toxicology and Chemistry 11-15 November, 2001 Baltimore, MD. p. 123
- Page DS\*, Boehm PD, Neff JM, Douglas GS, Bence AE, Burns WA, Mankiewicz PJ (2001) "Bioavailability of Polycyclic Aromatic Hydrocarbons from Residues of the Exxon Valdez Oil Spill at Worst-Case Locations in Prince William Sound, Alaska." *SETAC, 22nd Annual Meeting Abstract Book*, Society of Environmental Toxicology and Chemistry 11-15 November, 2001 Baltimore, MD. p. 31
- Neff JM\*, Boehm PD, Page DS. (2001) "Relationship Between Molecular Weight and Bioavailability of PAHs in Sediments of Prince William Sound, Alaska, Following the Exxon Valdez Oil Spill." *SETAC, 22nd Annual Meeting Abstract Book*, Society of Environmental Toxicology and Chemistry 11-15 November, 2001 Baltimore, MD. p. 123
- Neff JM\*. Page DS, Pearson W, Brannon, E, (2001) "The Value of Chemical Analysis in Assessing the Risks to Herring and Salmon Populations from the Exxon Valdez Crude Oil Spill." *SETAC, 22nd Annual Meeting Abstract Book*, Society of Environmental Toxicology and Chemistry 11-15 November, 2001 Baltimore, MD. p. 78
- Boehm PD\*, Page DS, Douglas GS, Brown JS, Bence AE, Burns WA, Mankiewicz PJ, Maki AW. (2001) "The importance of characterizing the chemical baseline in oil spill and ecological risk assessments - Use and misuse of "pristine" *SETAC, 22nd Annual Meeting Abstract Book*, Society of Environmental Toxicology and Chemistry 11-15 November, 2001 Baltimore, MD. p. 124
- Gilfillan ES\*, Page DS, Boehm PD, Parker KR. (2001) "The importance of considering physical factors other than oiling in oil spill natural resource damage assessment. – The case of the 1989 Exxon Valdez." *SETAC, 22nd Annual Meeting Abstract Book*, Society of Environmental Toxicology and Chemistry 11-15 November, 2001 Baltimore, MD. p. 267
- Page DS, Boehm PD, Stubblefield WA, Parker KR, Gilfillan ES, Neff JM, Maki AW. (2002) Hydrocarbon Composition and Toxicity of Sediments Following the Exxon Valdez Oil Spill in Prince William Sound, Alaska. *Environmental Toxicology and Chemistry*. **21**(7), 1438-1450.
- Page, DS, Gilfillan ES, Boehm PD, Neff JM, Stubblefield WA, Parker KR, A.W. Maki AW. (2002) "Sediment toxicity measurements in oil spill injury assessment: A study of shorelines affected by the Exxon Valdez oil spill in Prince William Sound, Alaska." In: M. Pelli, A. Porta and R.E. Hinchee (eds.) *Proceedings of the First International Conference on Remediation of Contaminated Sediments*, Venice, Italy, October 10-11, 2001, Battelle Press, Columbus OH. 137-146.

- Gilfillan ES, Harner EJ, Page DS. (2002) Comment on Peterson et al. 'Sampling design begets conclusions' *Marine Ecology Progress Series* 231, 303-308.
- Page, D.S., A.E. Bence, W.A. Burns, P.D. Boehm, J.S. Brown and G.S. Douglas . (2002) "A Holistic Approach to Hydrocarbon Source Allocation in the Subtidal Sediments of Prince William Sound, Alaska, Embayments" In: Proceedings of the 25th Arctic and Marine Oil Spill Program (AMOP) Technical Seminar, Environment Canada, Calgary, AB, Canada June 11-13, 2002, 547-563.
- Boehm PD, Burns WA, Page DS, Bence AE, Mankiewicz, Brown JS and Douglas GS. (2002) "Total Organic Carbon, an Important Tool in a Holistic Approach to Hydrocarbon Source Fingerprinting." In: Proceedings of the 25th Arctic and Marine Oil Spill Program (AMOP) Technical Seminar, Environment Canada. Calgary, AB, Canada June 11-13, 2002, 413-427.
- Inyang, L.E.D., Essien, G.E., Moses, B.S., Gundlach, E.R., Gilfillan, E.S. and Page, D.S. (2002) "Analysis of Potential Effects of the Idoho-QIT Oil Spill on River-Estuarine Fisheries in Nigeria." In: Proceedings of the 25th Arctic and Marine Oil Spill Program (AMOP) Technical Seminar, Environment Canada. Calgary, AB, Canada June 11-13, 2002, 941-957.
- Page, D.S., A.E. Bence, W.A. Burns, P.D. Boehm, J.S. Brown and G.S. Douglas. (2002) A Holistic Approach to Hydrocarbon Source Allocation in the Subtidal Sediments of Prince William Sound, Alaska, Embayments. *Environmental Forensics* 3(3-4), 331-340.
- Boehm PD, Burns WA, Page DS, Bence AE, Mankiewicz, Brown JS and Douglas GS. (2002) Total Organic Carbon, an Important Tool in a Holistic Approach to Hydrocarbon Source Fingerprinting. *Environmental Forensics* 3(3-4), 243--250.
- Boehm, P.D., D. S. Page , G. S. Douglas , W. A. Burns , A. E. Bence , P. J. Mankiewicz. 2002. "Environmental geochemical approaches to defining the fate, effects, and sources of hydrocarbons in the Exxon Valdez spill zone: Prince William Sound." Abstract Book: 224th ACS National Meeting (Boston, August 18-22, 2002)/GEOC / Biogeochemistry of Marine Organic Matter in the Contemporary Environment and Ancient Sediments. In Honor of Professor James G. Quinn. p.
- Gilfillan, E. S., D.S. Page and C. Perry. (2002) "Use of remote sensing to determine the effect of an in situ burn of jet fuel on emergent aquatic vegetation." In: C.A. Brebbia (ed.) Oil and Hydrocarbon Spills III: Modelling, Analysis and Control . WIT Press, Southampton, UK. pp. 405-413
- Burns, W. A., A. E. Bence, P. D. Boehm, J. S. Brown, D. S. Page, G. S. Douglas and K. R. Parker (2002). Source allocation by least-squares hydrocarbon fingerprint matching. SETAC, 23rd Annual Meeting Abstract Book, Society of Environmental Toxicology and Chemistry 16-20 November, 2002., Salt lake City, UT. 33.
- Huggett, R. J., D. S. Page, K. R. Parker, J. R. Brown and A. E. Bence. (2002). Biomarker studies of fish in Prince William Sound and the Gulf of Alaska: 1999-2000. SETAC, 23rd Annual Meeting Abstract Book, Society of Environmental Toxicology and Chemistry 16-20 November, 2002. Salt lake City, UT., Salt lake City, UT. 226.

- Page, D., P. Boehm, J. Brown, A. Bence, W. Burns and G. Douglas (2002). Historical Analysis as a Tool in Identifying PAH Sources in Prince William Sound, Alaska Sediments. SETAC, 23rd Annual Meeting Abstract Book, Society of Environmental Toxicology and Chemistry 16-20 November, 2002. Salt Lake City, UT. 33.
- Page, D. S., P. D. Boehm, J. S. Brown, A. E. Bence, W. A. Burns, G. S. Douglas and J. M. Neff (2002). Baseline Studies on the Bioavailable Polycyclic Aromatic Hydrocarbons in Prince William Sound, Alaska. SETAC, 23rd Annual Meeting Abstract Book, Society of Environmental Toxicology and Chemistry 16-20 November, 2002., Salt Lake City, UT. 125.
- Page, D. S., A. E. Bence, W. A. Burns, P. D. Boehm, G. S. Douglas and J. S. Brown (2003). The role of petroleum geochemistry in defining oil spill recovery: examples from the Exxon Valdez spill in Prince William Sound, Alaska. *Proceedings of the 2003 Oil Spill Conference*, American Petroleum Institute, Washington, D.C., 291-298
- Boehm, P. D., J. M. Neff, J. S. Brown, D. S. Page, W. A. Burns, A. W. Maki and A. E. Bence (2003). The chemical baseline as a key to defining continuing injury and recovery of Prince William Sound. *Proceedings of the 2003 Oil Spill Conference*, American Petroleum Institute, Washington, D.C., 275-283
- Neff, J. M., P. D. Boehm, R. Kropp, W. A. Stubblefield and D. S. Page (2003). Monitoring recovery of Prince William Sound, Alaska, following the Exxon Valdez oil spill: bioavailability of PAH in offshore sediments. *Proceedings of the 2003 Oil Spill Conference*, American Petroleum Institute, Washington, D.C., 299-305
- Gilfillan, E.S., D.S. Page and K.R. Parker (2003) Multivariate analysis of community structure over ten years following the Exxon Valdez oil spill. *Proceedings of the 2003 Oil Spill Conference*, American Petroleum Institute, Washington, D.C., 285-289
- Boehm, P. D., J. M. Neff and D. S. Page. (2003) Letter to the editor. *Marine Environmental Research*, Volume 55, pp. 459-461
- Lytle, T.F., Manning, C.S., Walker, W.W., Lytle, J.S., Page, D.S. (2003) Life-cycle toxicity of dibutyltin to the sheepshead minnow (*Cyprinodon variegatus*) and implications of the ubiquitous tributyltin impurity in test material. *Appl. Organometal. Chem.* 2003; 17: 653-661
- Huggett, RJ, Stegeman, JJ, Page, DS, Parker, KR, Woodin, B and Brown, JS (2003). Biomarkers in Fish from Prince William Sound and the Gulf of Alaska: 1999-2000. *Environmental Science and Technology*: 37, 4043-4051.
- Page D.S., Boehm P.D., Stubblefield W.A., Parker K.R., Gilfillan E.S., Neff J.M., Maki A.W. (2003) Reply to: Rice SD, Carls MG, Heintz RA, Short JW. Comment on "Hydrocarbon composition and toxicity of sediments following the Exxon Valdez oil spill in Prince William Sound, Alaska, USA" by Page et al. *Environmental Toxicology and Chemistry*. Vol 22 (11) 2539-2540.
- Page, D.S., Huggett, RJ, Stegeman, JJ, Parker, KR, Woodin, B, Brown, JS and Bence, AE. (2004). Polycyclic Aromatic Hydrocarbon Sources Related to Biomarker Levels in Fish from Prince William Sound and the Gulf of Alaska. *Environmental Science and Technology*, 38(19), 4928 - 4936.

- Page, D.S., Huggett, R.J, Stegeman, J.J, Parker, K.R., Woodin, B., Brown, J.S., Bence, A.E. (2004) Sources of Polycyclic Aromatic Hydrocarbons Related to Biomarker Levels in Fish from Prince William Sound and the Gulf of Alaska. *Marine Environmental Research* 58 (2004) 313-314
- Douglas, G.S., Burns, W.A., Bence, A.E., Page D. S. and Boehm, P.D. (2004) Optimizing Detection Limits for the Analysis of Petroleum Hydrocarbons in Complex Environmental Samples. *Environmental Science and Technology*. 38, 3958-3964
- Boehm, PD, Page, DS, Brown, JS, Neff, JM and Burns, WA. (2004) Polycyclic Aromatic Hydrocarbon Levels in Mussels From Prince William Sound, Alaska, USA, Document the Return to Baseline Conditions. *Environmental Toxicology and Chemistry*, 23(12), 2916-2929.
- Page, D. S., P. D. Boehm, J. S. Brown, A. E. Bence, J. M. Neff and Wooley, C. (2004). A tiered approach measures the aerial extent of PAH contaminated shoreline sediments at historic industrial sites in Prince William Sound, Alaska. SETAC, 25th Annual Meeting and 4th World Congress Abstract Book, Society of Environmental Toxicology and Chemistry 14-18 November, 2004., Portland, OR. p. 37
- Inyang, L.E.D. Essien, G.E., Ndiomu, C.B. Page, D.S., V. Imevbore, V. (2005). Containment, Clean-Up and Scientific Assessment of Mobil Producing Nigeria November 22, 2003 Liquid Release Incident. *Proceedings of the 2005 Oil Spill Conference*, American Petroleum Institute, Washington, D.C., 323-328.
- Page, D.S., Boehm, P.D., Brown, J.S., Neff, J.M., Burns, W.A., Bence, A.E. (2005) Mussels Document Loss of Bioavailable Polycyclic Aromatic Hydrocarbons and the Return to Baseline Conditions for Oiled Shorelines in Prince William Sound, Alaska. *Marine Environmental Research* 60(4), 422-436.
- Boehm, PD, Page, DS, Brown, JS, Neff, JM and Bence, AE. (2005) Comparison of Mussels and Semi-Permeable Membrane Devices as Intertidal Monitors of Polycyclic Aromatic Hydrocarbons at Oil Spill Sites. *Marine Pollution Bulletin*, 50, 740-750.
- Page, DS., P.D. Boehm, J.S. Brown, A. E. Bence, J.M. Neff 2005. A tiered approach measures the extent of PAH contaminated shoreline sediments at spills sites in Prince William Sound, Alaska. SETAC, 26th Annual Meeting Abstract Book, Society of Environmental Toxicology and Chemistry 13-17 November, 2005., Baltimore, MD, USA p. 121
- Neff, J.M., Brown, J.S., Boehm, P.D., Bence, A.E., Parker, K.R., and Page, D.S. (2006) Bioavailability of PAH from Buried Shoreline Oil Residues 13 Years After the Exxon Valdez Oil Spill: A Multispecies Assessment. *Environmental Toxicology and Chemistry*. *Environmental Toxicology and Chemistry* 25, 947-961.
- Page, D.S., Brown, J.S., Boehm, P.D., Bence, A.E., Neff, J.M. (2006) A Hierarchical Approach Measures the Aerial Extent and Concentration Levels of PAH-Contaminated Shoreline Sediments at Historic Industrial Sites in Prince William Sound, Alaska. *Marine Pollution Bulletin*, 52(4), 367-379
- W. A. Burns, W. A., S. M. Mudge, A. E. Bence, P. D. Boehm, J. S. Brown, D. S. Page and K. R. Parker. 2006. Source Allocation by Least-Squares Hydrocarbon Fingerprint Matching. *Environmental Science and Technology*, 40 6561-6567.

- Bence, A. E., Page, D. S. and Boehm, P. D. (2007). Advances in Forensic Techniques for Petroleum Hydrocarbons: The Exxon Valdez Experience. In: Zhendi Wang, Z. and Stout, S. A. eds. "Oil Spill Environmental Forensics: Fingerprinting And Source Identification." Academic Press, Burlington, MA, USA. pp. 450-487.
- Boehm, P. D., and Page, D. S. (2007) Exposure Elements in Oil Spill Risk and Natural Resource Damage Assessments: A Review. *Human and Ecological Risk Assessment*. 13: 418-448.
- Boehm, P. D., Neff, J. M. and Page, D. S. (2007). Assessment of Hydrocarbon Exposure in the Waters of Prince William Sound After the Exxon Valdez Oil Spill: 1989-2005. *Marine Pollution Bulletin* 54, 339-356.
- Boehm, P. D., Page, D. S., Neff, J. M. and Johnson, C. B. (2007) Potential for Sea Otter Exposure to Remnants of Buried Oil From the Exxon Valdez Oil Spill. *Environmental Science and Technology* 41: 6860-6867.
- Page, D.S., P.D. Boehm and J.M. Neff. (2008) "Shoreline Type and Subsurface Oil Persistence in the Exxon Valdez Spill Zone of Prince William Sound, Alaska." In: Proceedings of the 31st AMOP Technical Seminar on Environmental Contamination and Response, Environment Canada, Calgary, AB, Canada June 3-5, 2008, 545-564.
- Boehm, P.D., Page, D.S., Brown, J.S., Neff, J.M., Bragg, J.R. and Atlas, R.M. (2008) Distribution and Weathering of Crude Oil Residues on Shorelines 18 Years After the Exxon Valdez Spill. *Environmental Science and Technology* 42: 9210-9216.
- Boehm, P.D., Page, D.S. and Neff, J.M. (2009) Comments on the misuse of SPMDs in recent articles by Springman et al. (2008a,b) and Short et al. (2008). *Marine Environmental Research* 67, 262-267.
- Boehm, P.D.; Neff, J.M.; Page, D.S. (2009) "Analysis of Mussels at Exxon Valdez Oil Spill Sites Confirms Negligible Bioavailability of Sequestered Oil Residues." Abstract Book: 30th Annual Meeting of the Society of Environmental Toxicology and Chemistry (SETAC) November 19-23, 2009, New Orleans, LA. p 110-111.
- Boehm, P.D.; Page, D.S.; Neff, J.M. (2009) "Problems in Using Passive Samplers in Oil Spill Studies." Abstract Book: 30th Annual Meeting of the Society of Environmental Toxicology and Chemistry (SETAC) November 19-23, 2009, New Orleans, LA. p 111.
- Boehm, P.D.; Page, D.S.; Neff, J.M.; Brown, J.S.; Bragg, J.A.; Atlas, R.M. (2009). "Form, Chemical Composition, and Location of Remnants of the Exxon Valdez Oil Spill after 18 Years." Abstract Book: 30th Annual Meeting of the Society of Environmental Toxicology and Chemistry (SETAC) November 19-23, 2009, New Orleans, LA. p. 89-90.
- Neff, J.M.; Page, D.S.; Boehm, P.D. (2009) "Do Wildlife and their Prey Continue to Be Exposed to Exxon Valdez Spill Remnants 18 Years after the Spill?" Abstract Book: 30th Annual Meeting of the Society of Environmental Toxicology and Chemistry (SETAC) November 19-23, 2009, New Orleans, LA. p. 90.
- Page, D.S.; Boehm, P.D.; Brown, J.S.; Neff, J.M. (2009) "Where Do Remnants of the Exxon Valdez Oil Spill Persist and Why?" Abstract Book: 30th Annual Meeting of the Society of Environmental Toxicology and Chemistry (SETAC) November 19-23, 2009, New Orleans, LA. p. 89.

- Page, D.S., Boehm, P.D. and Neff, J.M. (2010) Comment on "Unlike PAHs from Exxon Valdez Crude Oil, PAHs from Gulf of Alaska Coals are not Readily Bioavailable." *Environmental Science and Technology* 44, 2210-2213.
- D. S. Page. "Oil Spill Injury Assessment - Some Lessons Learned 1977-2010." North Atlantic Chapter Society of Environmental Toxicologists and Chemists Annual Meeting, Narragansett, RI June 2-4, 2010
- J. Neff, D.S. Page, P. Boehm, J.S. Brown. "Are Harlequin Ducks Still Exposed to Oil Remnants 21 Years After the Exxon Valdez Oil Spill?" Abstract Book: 31st Annual Meeting of the Society of Environmental Toxicology and Chemistry North America (SETAC) Bridging Science With Communities, Oregon Convention Center, Portland, Oregon, USA., 07 - 11 November 2010. p. 100.
- P. Boehm, D.S. Page, J. Neff, J.S. Brown "Are Sea Otters Still Exposed to Oil Remnants 21 Years after the Exxon Valdez Oil Spill?" Abstract Book: 31st Annual Meeting of the Society of Environmental Toxicology and Chemistry North America (SETAC) Bridging Science With Communities, Oregon Convention Center, Portland, Oregon, USA., 07 - 11 November 2010. p. 100.
- D.S. Page, P. Boehm, J.S. Brown, J. Neff. "Status of Remaining Oil 21 Years after the Exxon Valdez Oil Spill in Prince William Sound, Alaska ." Abstract Book: 31st Annual Meeting of the Society of Environmental Toxicology and Chemistry North America (SETAC) Bridging Science With Communities, Oregon Convention Center, Portland, Oregon, USA., 07 - 11 November 2010. p. 100.
- J.M. Neff, D.S. Page, P.D. Boehm. (2011) Exposure of Sea Otters and Harlequin Ducks in Prince William Sound, Alaska, USA, to Shoreline Oil Residues 20 Years After the Exxon Valdez Oil Spill. *Environmental Toxicology and Chemistry*, Vol. 30, No. 3, pp. 659-672.
- P.D. Boehm, D.S. Page, J.M. Neff, J.S. Brown. (2011) Are sea otters being exposed to subsurface intertidal oil residues from the Exxon Valdez oil spill? *Marine Pollution Bulletin* 62, 581-589.
- Chapman, P., Landrum, P., Neff, J. and Page, D. (2011) Evaluating the Toxicity of Petroleum in Aquatic Environments. 39th Aquatic Toxicity Workshop. Winnipeg, Manitoba. October 2 to 5, 2011. Abstract Book p. 29
- Chapman, P.M., P.F. Landrum, J. Neff, and D.S. Page. Evaluating the Toxicity of Petroleum in Arctic and Other Aquatic Environments. Abstract Book: Society of Environmental Toxicologists and Chemists 32nd Annual Meeting, November 13-17, 2011, Boston, MA. p. 137
- Landrum PF, Chapman PM, Neff JM, Page DS. 2012. Evaluating the Aquatic Toxicity of Complex Organic Chemical Mixtures: Lessons Learned from Polycyclic Aromatic Hydrocarbon and Petroleum Hydrocarbon Case Studies. *Integrated Environmental Assessment and Management*. 8, 217-230.
- Page DS, Neff JM, Landrum PF, Chapman PM. 2012. Comment on "Sensitivity of fish embryos to weathered crude oil: Part II. Increased mortality of pink salmon (*Oncorhynchus gorbuscha*) embryos incubating downstream from weathered Exxon Valdez crude oil" *Environmental Toxicology and Chemistry*, 31(3), 469-476.

- Page, D. S., Chapman, P. M., Landrum, P. F., Neff, J. and Elston, R. (2012) A Perspective on the Toxicity of Low Concentrations of Petroleum-Derived Polycyclic Aromatic Hydrocarbons to Early Life Stages of Herring and Salmon. *Human and Ecological Risk Assessment*. 18:2, 229-260
- Landrum, P., Page, D., Chapman, P. and Neff, J. (2012) The Dose Not The Concentration Makes the Poison – Aquatic Toxicity Under Changing Water Concentrations. 40th Aquatic Toxicity Workshop. Sun Peaks, British Columbia, Canada. October 1 to 3, 2012. Abstract Book p. 61-62
- Landrum, P., Page, D., Chapman, P. and Neff, J. (2012) The Dose Not The Concentration Makes the Poison – Aquatic Toxicity Under Changing Water Concentrations. Abstract Book: Society of Environmental Toxicologists and Chemists 33rd Annual Meeting, November 11-15, 2012, Long Beach, CA. Abstract Book p. 315
- Neff JM, Page DS, Landrum PF, Chapman PM. 2013. The Importance of Both Potency and Mechanism in Dose-Response Analysis: An Example from Exposure of Pacific Herring (*Clupea pallasii*) Embryos to Low Concentrations of Weathered Crude Oil. *Marine Pollution Bulletin*, 67, 7-15.
- Landrum PF, Chapman PM, Neff JM, Page DS. 2013. Implications of Changing Exposure Concentrations in Water on Toxicokinetics of Organic Contaminants in Aquatic Organisms: Theoretical and Case Studies. *Integrated Environmental Assessment and Management*. 9 (2) 196–210.
- Boehm, PD., ER. Gundlach and DS. Page. (2013) Chapter 2: The phases of an oil spill and scientific studies of spill effects. In: J. A. Wiens (ed) "*Oil in the Environment: Legacies and Lessons of the Exxon Valdez Oil Spill.*" Cambridge University Press, Cambridge, UK. pp. 37-52.
- Boehm, PD., JM. Neff and DS. Page. (2013) Chapter 3: Oil in the water column. In: J. A. Wiens (ed) "*Oil in the Environment: Legacies and Lessons of the Exxon Valdez Oil Spill.*" Cambridge University Press, Cambridge, UK. pp. 57-77.
- Page, DS., PD. Boehm, JS. Brown, ER. Gundlach and JM. Neff. (2013) Chapter 6: Fate of oil on shorelines. In: J. A. Wiens (ed) "*Oil in the Environment: Legacies and Lessons of the Exxon Valdez Oil Spill.*" Cambridge University Press, Cambridge, UK. pp. 116-143.
- Gundlach, ER., DS. Page, JM. Neff and PD. Boehm (2013) Chapter 10: Shoreline biota. In: J. A. Wiens (ed) "*Oil in the Environment: Legacies and Lessons of the Exxon Valdez Oil Spill.*" Cambridge University Press, Cambridge, UK. pp. 241-262.
- Page, D. S., Chapman, P. M., Landrum, P. F., Neff, J. and Elston, R. (2014) It's the Dose, Not the Hypothesis: Reply to Heintz et al. (2014). *Human and Ecological Risk Assessment* (in press)

### Some Manuscript Reports:

Final Report; Effects of Tamano Spill on the Marine Environment, State of Maine Department of Marine Resources Contract DMR 5-75, D.W. Mayo, D.S. Page, and E.S. Gilfillan, Bowdoin College, (1976).

Final Report; Comprehensive Study of Petroleum Hydrocarbons in the Marine Environment at Long Cove, Searsport Maine--An Ecological, Physiological, Chemical and Histopathological Survey. Maine Department of Environmental Protection Contract #906439, E.S. Gilfillan, S.A. Hanson, D.S. Page, D.W. Mayo, J. Cooley (Bowdoin College), J. Chalfant, T. Archambeault, A. West (Maritec), and J.C. Harshbarger (Smithsonian Institution), (1977).

Report; A Survey of Hydrocarbons in Bloodworms and Accompanying Sediments from the Wiscasset, Maine Area. Maine Department of Marine Resources. (1977).

E.S. Gilfillan, D.S. Page and J.C. Foster. "Tidal Area Dispersant Project: Fate and Effects of Chemically Dispersed Oil in the Nearshore Benthic Environment." American Petroleum Institute Publication No. 4440, July (1986), 215 pp.

Abasiokong, E.M., Akpan, A.W., Alo, B., Antiah, E.E., Dandy, D., Ewa-Oboho, I., Gilfillan, E.S., Gundlach, E.R., Imevbore, V., Itah, A.Y., Kusemiju, K., Moses, B.S., Nwanko, D.I., Oladimeji, O., Olookudejo, D.J., Onwudiegwu, U., Onwuteaka, J., Osain, K.K., Owoola, T., Page, D.S. "January, 1998 Idoho-QIT 24" Pipeline Oil Spill Post Impact Assessment Final Report," Mobil Producing Nigeria, Lagos, Nigeria, July 1999, 400 pp. & appendices.

S. Jones, L. White, G. Klassen, P. Wells, G. Harding, C. Krahforst, G. Brun, P. Hennigar, S. Shaw, J. Schwartz, D. Page, P. Trowbridge, D. Taylor, J. Aube. The Gulfwatch Program: 1993-2001: A Review of the Scientific Results. January, 2007 Draft for Peer-Review, Environmental Quality Monitoring Committee of the Gulf of Maine Council on the Marine Environment 148 pp. & appendices.

Christian Krahforst, Barbara Arter, Jamie Aube, Cynthia Bourbonnais-Boyce, Guy Brun, Gareth Harding, Peter Hennigar, David Page, Stephen Jones, Susan Shaw, James Stahlnecker, Jack Schwartz, Darrell Taylor, Bruce Thorpe, Peter Vass, and Peter Wells. "Gulfwatch 2006 Data Report: Sixteenth Year Of The Gulf Of Maine Environmental Monitoring Program." Gulf of Maine Council on the Marine Environment. January 2009. 190 pp.

Lawrence A. LeBlanc, Christian Krahforst, Jamie Aube, Shawn Roach, Guy Brun, Gareth Harding, Peter Hennigar, David Page, Stephen Jones, Susan Shaw, James Stahlnecker, Jack Schwartz, Darrell Taylor, Bruce Thorpe, and Peter Wells. Gulfwatch 2007 Data Report: Seventeenth Year Of The Gulf Of Maine Environmental Monitoring Program," Gulf of Maine Council on the Marine Environment. January 2009. 156 pp.

Lawrence A. LeBlanc, Christian Krahforst, Jamie Aube, Shawn Roach, Guy Brun, Gareth Harding, Peter Hennigar, David Page, Stephen Jones, Susan Shaw, James Stahlnecker, Jack Schwartz, Darrell Taylor, Bruce Thorpe, and Peter Wells. Gulfwatch 2008 Data Report: Eighteenth Year Of The Gulf Of Maine Environmental Monitoring Program." Gulf of Maine Council on the Marine Environment. January 2009. 142 pp.

Lawrence A. LeBlanc, Christian Krahforst, Jamie Aube, Shawn Roach, Gareth Harding, David Page, Stephen Jones, Phillip Trowbridge, Matthew Wood, James Stahlnecker, Jack Schwartz, Darrell Taylor, Bruce Thorpe and Peter Wells. Gulfwatch 2009 Data Report: Eighteenth Year Of The Gulf Of Maine Environmental Monitoring Program." Gulf of Maine Council on the Marine Environment. February 2013. 138 pp.

Lawrence A. LeBlanc Christian Krahforst, Jamie Aube, Shawn Roach, Gareth Harding, David Page, Stephen Jones, Phillip Trowbridge, Matthew Wood, James Stahlnecker, Jack Schwartz, Darrell Taylor, Bruce Thorpe and Peter Wells. Gulfwatch 2010 Data Report: Eighteenth Year Of The Gulf Of Maine Environmental Monitoring Program." Gulf of Maine Council on the Marine Environment. February 2013. 140 pp.

### Books/Chemical Education:

Contributions to "Modular Laboratory Program in Chemistry," H.A. Neidig and J.N. Spencer editors; Willard Grant Press, Inc., Publishers, Boston, MA.

D. S. Page and R.E. Davis, "Analysis of Sulfur Dioxide in Air--An Environmental Experiment." (1972).

D.S. Page and R.E. Davis, "The Kinetics of the Hydrolysis of Sodium Borohydride." (1972).

D.S. Page and R.E. Davis, "The Kinetics of the Hydrolysis of Methyl Acetate." (1971).

D.S. Page and R.E. Davis, "Electrolysis and Avogadro's Number." (1970).

J.G. Boyles and D.S. Page, "The Chemistry and Qualitative Analysis of Cations,"

- Group I and Introduction. (1973)

- Group II. (1973)

- Groups III and IV. (1973)

J.G. Boyles and D.S. Page, "The Chemistry and Qualitative Analysis of Anions." (1973).

D.S. Page, *Principles of Biological Chemistry*, Willard Grant Press Inc., Boston, MA (1976).

D.S. Page, *Study Guide to Accompany Principles of Biological Chemistry*, Willard Grant Press Inc., Boston, MA (1976).

D.S. Page, *Principles of Biological Chemistry*, Willard Grant Press Inc., Boston, MA, Second Edition, (1981).

D.S. Page, *Study Guide to Accompany Principles of Biological Chemistry*, Willard Grant Press Inc., Boston, MA, Second Edition, (1981).

Butcher, S.S., Mayo, D.W., Pike, R.M., Foote, C.M., Hotham, J.R., Page, D.S. Microscale organic laboratory I: An approach to improving air quality in instructional laboratories (1985) *Journal of Chemical Education*, 62 (2), pp. 147-149. Cited 2 times.

Mayo, D.W., Butcher, S.S., Pike, R.M., Foote, C.M., Hotham, J.R., Page, D.S. Microscale organic laboratory II: The benefits derived from conversion to the program and representative experiments (1985) *Journal of Chemical Education*, 62 (2), pp. 149-151.

J.G. Boyles, J.C. Foster and D.S. Page, "The Chemistry and Qualitative Analysis of Anions." In: *Modular Laboratory Program in Chemistry*, H.A. Neidig (ed). Chemical Education Resources.

J.G. Boyles, J.C. Foster and D.S. Page, "The Chemistry and Qualitative Analysis of Cations." In: *Modular Laboratory Program in Chemistry*, H.A. Neidig (ed). Chemical Education Resources.

- Group I and Introduction. (1988)

- Group II. (1988)

- Groups III and IV. (1988)

**ITEM 15**

**NO BACK UP MATERIALS**

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# CONSENT AGENDA - A BACK UP MATERIALS

**Draft**  
**BRUNSWICK TOWN COUNCIL**  
**Minutes**  
**January 21, 2014**  
**7:00 P.M.**  
**Morrell Meeting Room**  
**Curtis Memorial Library**  
**23 Pleasant Street**

**Councilors Present:** Chair Benet Pols, W. David Watson, Stephen S. Walker, Suzan Wilson, John M. Perreault, Gerald E. Favreau, Jane F. Millett, Sarah E. Brayman, and John Richardson, Jr.

**Councilors Absent:** None

**Town Staff Present:** Fran Smith, Town Clerk/Assistant to the Town Manager; Elin M. Gould, Deputy Town Clerk; John Eldridge, Finance Director; Anna Breinich, Director of Planning and Development; Dan Devereaux, Marine Warden; Steve Langsdorf, Town Attorney; and TV video crew

Chair Pols called the meeting to order, led the Pledge of Allegiance, and asked the Clerk for Roll Call.

**Public Comment:**

**Amy Waterman** and **Marilee Tiemann** announced the events planned for the tenth anniversary of Longfellow Days and this year's theme of the Civil War and Longfellow's connection to it.

**Ed Cowan**, owner of Sunshine Too Laundromat at Cooks Corner, asked questions and commented about operating costs at the McLellan Building, the type of background needed for the new Town Manager, and the Cooks Corner connector road.

**Correspondence:**

Councilor Watson commended **Max Finkle**, a Bowdoin student, for organizing a veteran's commemorative event at the upcoming Bowdoin hockey game as a fundraiser for the Wounded Warrior project. Chair Pols added information about the event.

Councilor Perreault spoke about an email he received regarding needed road work on Nancy Drive, stating that he will pursue it in this year's budget.

Councilor Millett said she received a letter from Dennis Sarofeen about train idling near Brooks Feed and Farm. Chair Pols also commented about the letter.

**Council Committee Updates:**

Councilor Richardson thanked Dan Devereaux and Steve Walker for their work on the application to the BDC for the quahog study.

Chair Pols made the following committee appointments:

- Councilor Perreault and Councilor Millett to the Downtown and Outer Pleasant Street Master Plan Implementation Committee
- Councilor Walker to the Recycling and Sustainability Committee
- Councilor Watson and Councilor Favreau to the MRRA Community Advisory Group

**Adjustments to the Agenda:** None

**MANAGER'S REPORT:**

**(a) Financial Update**

Fran Smith gave this update.

Chair Pols spoke about a pending bill in the legislature that would affect revenue sharing.

**(b) Permission to allow the Marine Resource Committee the authority to open and close coastal waters**

Fran Smith and Chair Pols explained this item.

**Councilor Wilson moved, Councilor Watson seconded, to authorize the Marine Resource Committee to open and close coastal waters per Chapter 11, Marine Activities Structures and Ways, Section 11-161 Opening and Closing of Coastal Waters.**

Councilor Perreault asked a question, to which Dan Devereaux responded.

Councilor Walker spoke about a related item upcoming in the legislature, LD 1452, and thanked Dan Devereaux for his work on this.

Vote on the motion:

**Councilor Wilson moved, Councilor Watson seconded, to authorize the Marine Resource Committee to open and close coastal waters per Chapter 11, Marine Activities Structures and Ways, Section 11-161 Opening and Closing of Coastal Waters. The motion carried with nine (9) yeas.**

*(A copy of a memo from Dan Devereaux will be attached to the official minutes.)*

**(c) Acceptance of a BDC grant for the Marine Resource Committee**

Ms. Smith introduced this item.

Dan Devereaux explained the issues the town is facing.

Chair Pols asked a question, to which Dan Devereaux responded.

**Councilor Wilson moved, Councilor Favreau seconded, to accept and expend a grant from the Brunswick Development Corporation in the amount of \$25,000 to be used to fund a marine resource study of quahog populations. The motion carried with nine (9) yeas.**

*(A copy of a letter from the BDC will be attached to the official minutes.)*

**(d) Reminder of Dog License renewals**

Ms. Smith gave this reminder.

**(e) Discussion of workshop schedule**

Ms. Smith announced two upcoming workshops, the first on February 10<sup>th</sup> covering two subjects, the Cooks Corner connector road and the Town Manager search, and a workshop on a possible revaluation, no date having been set at this point.

Chair Pols, Councilor Perreault, and Councilor Walker also spoke about the workshops.

**(f) Discussion of the development of the 2014-15 Municipal Budget**

Ms. Smith announced that Finance Director John Eldridge would take the lead on budget preparation to provide an easier transition, as the Town Manager will be leaving prior to budget adoption.

**(g) Discussion of PretiFlaherty's fee structure to provide legal services to the Town**

Chair Pols reviewed the options.

Councilor Favreau, Councilor Millett, Councilor Richardson, and Councilor Perreault asked questions and made recommendations.

Chair Pols introduced the new Town Attorney, Steve Langsdorf, who made brief comments.

*(A copy of the financial options of PretiFlaherty's proposal for legal services will be attached the official minutes.)*

**PUBLIC HEARING**

- 4. The Town Council will hear public comments on a special amusement license application, and will take any appropriate action. (Manager)**

**Special Amusement  
Brunswick Lodge of Elks #2043  
D/B/A: Brunswick Lodge of Elks  
179 Park Row**

**Ms. Angela Brackett**

Chair Pols opened the public hearing. Hearing no comments, he closed the public hearing.

**Councilor Favreau moved, Councilor Watson seconded, to approve a special amusement license application for the Brunswick Lodge of Elks #2043. The motion carried with nine (9) yeas.**

**NEW BUSINESS**

5. **The Town Council will hear an update from MaineDOT on the re-routing of Route 24 and the creation of a Business Route 24 along Main Street and Elm Street in Topsham and Maine Street and Bath Road in Brunswick, as recommended in the Route 24 Corridor Study completed by the Midcoast Council of Governments, and will determine if any future action is necessary. (Manager)**

Chair Pols introduced this item.

**Peter Coughlan**, MDOT, made a presentation.

Councilor Millet made comments, to which Mr. Coughlan and **Margo Knight**, a member of the advisory committee, responded.

Councilor Watson, Chair Pols, Councilor Wilson, and Councilor Favreau spoke on this item, with Mr. Coughlan responding to their comments.

*(A memo from the Director of Planning and Development and a map are attached to the official minutes.)*

6. **The Town Council will consider setting a public hearing for February 3, 2014, on Zoning Ordinance amendments relative to the Village Review Board membership, and will take any appropriate action. (Manager)**

Anna Breinich, Director of Planning and Development, explained this item.

**Councilor Favreau moved, Councilor Brayman seconded, to set a public hearing for February 3, 2014, on Zoning Ordinance amendments relative to the Village Review Board membership.**

Councilor Walker, Councilor Favreau, and Councilor Millett asked questions, to which Ms. Breinich responded.

Vote on motion:

**Councilor Favreau moved, Councilor Brayman seconded, to set a public hearing for February 3, 2014, on Zoning Ordinance amendments relative to the Village Review Board membership. The motion carried with nine (9) yeas.**

*(A memo from the Director of Planning and Development will be attached to the official minutes.)*

- 7. The Town Council will consider the “Resolution authorizing the Town Treasurer to waive foreclosure on certain real estate tax lien mortgages,” and will take any appropriate action. (Manager)**

Chair Pols explained this item.

**Councilor Perreault moved, Councilor Millett seconded, to adopt the “Resolution authorizing the Town Treasurer to waive foreclosure on certain real estate tax lien mortgages.” The motion carried with nine (9) yeas.**

*(A copy of the resolution will be attached to the official minutes.)*

- 8. The Town Council will discuss the process for hiring a new Town Manager, and will determine if any future action is necessary. (Chair Pols and Councilor Brayman)**

Chair Pols initiated the discussion, calling for comments on the Town Manager job description.

Councilor Wilson, Councilor Richardson, Councilor Favreau, Councilor Millett, and Councilor Watson spoke on this item.

This subject will be a topic at a Council workshop on February 10, 2014.

*(A copy of a memo from the Town Clerk, the current Town Manager job description, and municipal manager recruitment survey results will be attached to the official minutes.)*

- 9. (ADDED) The Town Council will consider appointments to the Town’s Boards and Committees, and will take any appropriate action. (Appointments Committee)**

Councilor Favreau nominated Soxna Dice and Margaret Wilson to the Planning Board.

Councilor Perreault nominated Sande Updegraph to the Planning Board.

The Council voted nine (9) yeas for Margaret Wilson and (6) yeas for Soxna Dice.

Margaret Wilson and Doxna Dice were appointed to the Planning Board.

Councilor Favreau nominated the following:

Robert Broderick to the Cable TV Advisory Committee  
John Lemont and Mark Latti to the Marine Resource Committee  
James Merritt and Charles Updegraph to the Personnel Board  
Constance Lundquist and Karen Topp to the Village Review Board

The Council voted nine (9) yeas to appoint the nominees.

**CONSENT AGENDA**

- a) **Approval of the Minutes of December 16, 2013**
- b) **Approval of the Minutes of January 6, 2014**
- c) **Approval of the Minutes of January 13, 2014**
- d) **Approval of Quitclaim Deed for property located at Map U06 Lot 028 Sub 000 Typ 000**

**Councilor Richardson moved, Councilor Favreau seconded, to approve the consent agenda. The motion carried with nine (9) yeas.**

*(A copy of the quit claim deed for CA-d will be attached to the official minutes.)*

**Councilor Watson moved, Councilor Favreau seconded, to adjourn the meeting. The motion carried with nine (9) yeas.**

The meeting adjourned at 8:43 p.m.

**PLEASE NOTE: THESE MINUTES ARE ACTION MINUTES. THE ENTIRE MEETING CAN BE VIEWED AT [WWW.BRUNSWICKME.ORG](http://WWW.BRUNSWICKME.ORG).**

*Elin M. Gould  
Deputy Town Clerk  
January 22, 2014*

February 3, 2014  
*Date of Approval*

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*Council Chair*

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# CONSENT AGENDA - B BACK UP MATERIALS

**Draft**  
**BRUNSWICK TOWN COUNCIL**  
**Minutes**  
**December 23, 2013**  
**Special Meeting**  
**3:00 P.M.**  
**Hawthorne School**  
**2<sup>nd</sup> Floor Meeting Room**  
**46 Federal Street**

**Councilors Present:** Chair Suzan Wilson, W. David Watson, Benjamin J. Tucker, John M. Perreault, Gerald E. Favreau, Margo H. Knight, Sarah E. Brayman, and Benet Pols

**Councilors Absent:** Councilor John Richardson Jr.

**Town Staff Present:** Gary Brown, Town Manager

Chair Wilson called the meeting to order.

**Executive Session for a Consultation with Town Attorney regarding the legal rights and responsibilities of the Council per 1 M.R.S.A. §405(6)(E).**

**Councilor Tucker moved, Councilor Pols seconded, to go into Executive Session for a consultation with the Town Attorney regarding the legal rights and responsibilities of the Council per 1 M.R.S.A. §405(6)(E). The motion carried with eight (8) yeas.**

The Town Council came out of executive session and action occurred.

**Councilor Tucker moved, Councilor Knight seconded, to accept the resignation of Town Manager Gary Brown, effective on or before March 31, 2014, and to authorize Ms. Wilson to act on the Council's behalf on all transitional matters prior to Manager Brown's departure. The motion carried with eight (8) yeas.**

**Councilor Watson moved, Councilor Favreau seconded, to adjourn the meeting. The motion carried with eight (8) yeas.**

*Please Note: There is no video recording of this meeting.*

*Frances Smith  
Town Clerk/Assistant to the Town Manager  
January 15, 2014*

January 21, 2014  
*Date of Approval*

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*Council Chair*