

STATE OF MICHIGAN  
 DEPARTMENT OF MANAGEMENT AND BUDGET  
 PURCHASING OPERATIONS  
 P.O. BOX 30026, LANSING, MI 48909  
 OR  
 530 W. ALLEGAN, LANSING, MI 48933

November 26, 2007

**CHANGE NOTICE NO. 13 (REVISED)**  
**TO**  
**CONTRACT NO. 071B1001740**  
**between**  
**THE STATE OF MICHIGAN**  
**and**

NAME & ADDRESS OF VENDOR  <b>Enfotech &amp; Consulting, Inc.</b> <b>11 Princess Road, Unit A</b> <b>Lawrenceville, NJ 08648</b>  <b>tony_jeng@enfotech.com</b>	TELEPHONE Tony Jeng <b>(609) 896-9777</b>
	VENDOR NUMBER/MAIL CODE
	BUYER/CA (517) 241-3215 <b>Steve Motz</b>
Contract Compliance Inspector: Patty Bogard <b>Consulting Services for an Electronic Wastewater Discharge Reporting System –          Department of Environmental Quality</b>	
CONTRACT PERIOD: From: <b>August 27, 2001</b> To: <b>September 30, 2009</b>	
TERMS <b>N/A</b>	SHIPMENT <b>N/A</b>
F.O.B. <b>N/A</b>	SHIPPED FROM <b>N/A</b>
MINIMUM DELIVERY REQUIREMENTS <b>N/A</b>	

**NATURE OF CHANGE (S):**

Effective immediately this contract is hereby **INCREASED** by \$188,492.00 to provide funding for maintenance per the attached work statement and vendor proposal.

All other terms, conditions, specifications and pricing remain unchanged.

**AUTHORITY/REASON:**

Per vendor and agency agreement and DMB/Purchasing Operations approval.  
 To correct Total Revised Estimated Contract Value to \$5,381,327.00.

**INCREASE: \$188,492.00**

**TOTAL REVISED ESTIMATED CONTRACT VALUE: \$5,381,327.00**

STATE OF MICHIGAN  
 DEPARTMENT OF MANAGEMENT AND BUDGET  
 PURCHASING OPERATIONS  
 P.O. BOX 30026, LANSING, MI 48909  
 OR  
 530 W. ALLEGAN, LANSING, MI 48933

November 16, 2007

**CHANGE NOTICE NO. 13**  
**TO**  
**CONTRACT NO. 071B1001740**  
**between**  
**THE STATE OF MICHIGAN**  
**and**

NAME & ADDRESS OF VENDOR  <b>Enfotech &amp; Consulting, Inc.</b> <b>11 Princess Road, Unit A</b> <b>Lawrenceville, NJ 08648</b>  <b>tony_jeng@enfotech.com</b>	TELEPHONE Tony Jeng <b>(609) 896-9777</b>
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Contract Compliance Inspector: Patty Bogard <b>Consulting Services for an Electronic Wastewater Discharge Reporting System –          Department of Environmental Quality</b>	
CONTRACT PERIOD: From: <b>August 27, 2001</b> To: <b>September 30, 2009</b>	
TERMS <b>N/A</b>	SHIPMENT <b>N/A</b>
F.O.B. <b>N/A</b>	SHIPPED FROM <b>N/A</b>
MINIMUM DELIVERY REQUIREMENTS <b>N/A</b>	

**NATURE OF CHANGE (S):**

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All other terms, conditions, specifications and pricing remain unchanged.

**AUTHORITY/REASON:**

Per vendor and agency agreement and DMB/Purchasing Operations approval.

**INCREASE: \$188,492.00**

**TOTAL REVISED ESTIMATED CONTRACT VALUE: \$5,192,835.00**

DEQ

11 Princess Road, Unit A  
Lawrenceville, NJ 08648

**enfoTech**

Sales: 609.896-9777  
Support: 609.896.2827  
Fax: 609.896.2555  
[www.enfotech.com](http://www.enfotech.com)

September 10, 2007

Mr. John Karlik  
Michigan Department of Information Technology  
Constitution Hall  
525 W. Allegan  
Lansing, MI 48933

**Subject: FY08 Annual Maintenance Proposal for enfoTech Supported Environmental Information Systems - NMS and E2 (for period from 10/1/2007 to 9/30/2008)**

Dear Mr. Karlik:

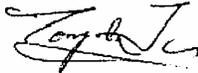
enfoTech provides software development, installation, and support of environmental information systems for the DEQ under certain contracts. These contracts provide an option for the DEQ to retain enfoTech to provide system maintenance and support services after the systems go into production. This proposal provides a cost estimate for maintaining the DEQ systems till 9/30/2008. The following systems are covered under this maintenance agreement:

1. NMS
2. E2

The total annual cost for system maintenance is \$ 188,492. A copy of the service agreement is included as Attachment A.

Thank you for the opportunity to present this cost proposal for your consideration.

Sincerely,



Tony C. Jeng  
Executive Vice President

cc: File - MDEQ, William Creal, Jeffrey Jones, Sony Su

## **ATTACHMENT A: SERVICE AND SUPPORT AGREEMENT**

### **(1) Overview**

The Michigan Department of Information Technology (MDIT) and Department of Environmental Quality (DEQ) retain enfoTech & Consulting, Inc. to develop and implement the NPDES Information Management System (NMS version 2.0) for Surface Water Quality Division users in order to support the NPDES compliance program mandated by the USEPA. In addition, the MDIT/WB (Licensee) also licenses enfoTech's (Licensor) E2 system to streamline Discharge Monitoring Report (DMR) and Drinking Water Report data collection by electronically collecting DMRs and DWRs via Internet and flow the data directly to the backend databases.

This Agreement is an annual technical support and maintenance program established between MDIT/WB and enfoTech for providing professional services to MDIT/WB for effective operation of the above systems used at the DEQ.

### **(2) Agreement Period:**

This Agreement will cover services immediately after a contract issue date to September 30, 2008.

### **(3) Fees and Payment:**

The annual support and maintenance fee for this Agreement is \$ 188,492. The fee is due, in full, at the onset of contract begin date.

It is recognized by DEQ and enfoTech that the System might continue to evolve and it is the intention of both parties to keep a similar time cycle for annual support and maintenance agreements in the future.

### **(4) Information Systems Covered Under This Agreement:**

Information Systems covered under this Service Agreement are listed below:

1. NMS
2. E2

### **(5) Maintenance Services Provided**

Services and support will be provided to the information systems listed in section 4 above. The services to be provided include the "Core Maintenance Service Program" (defined in Section 6).

### **(6) Core Maintenance Service Program**

The Core Maintenance Service Program will provide Water Bureau (WB) with routine maintenance, technical support, and general needed efficiency changes or improvements in connection with the Information Systems covered under this Agreement. The specific core maintenance services are defined as follow:

#### **(6.a) User Support**

- "Senior-level" voice technical support, Monday through Friday, 9:00 AM to 6:00 PM EST, with a guaranteed callback response of less than four hours and unlimited incidents;
- Email support with a guaranteed eight-hour acknowledgement;

- Internet and FTP technical support for technical services, documentation, system upgrades, and new releases;
- Dial-up service via VPN/Terminal service on a high-speed Internet line for technical support on the Systems (if VPN/Terminal service is provided by Michigan).

**(6.b) Site Visit Support**

- Provide “limited” on-site technical consultation and user/system support to MDIT/WB upon request;
- Actual site visits will be determined based on MDIT/WB needs. Each visit must be pre-approved by the Michigan program manager;
- Potential site visits will be provided to a total of six (6) man-day visits;
- Traveling costs (air tickets, rental car, hotel, meals, etc.) are already included as part of the total service package in the annual support contract at no additional fee to MDIT/WB. No cost reductions will be made if fewer site visits are requested/needed by MDIT/WB.

**(6.c) General Efficiency Improvements and Bug Fixes**

- General Efficiency Changes: are minor improvements to the existing functions;
- Bugs: “Bugs” are system errors that will cause the System to stop functioning or generate incorrect results;
- All general efficiency improvements and bug fixes will be addressed by enfoTech. WB and enfoTech will work together to prioritize all system changes. System changes will be delivered to WB in accordance with the “System Release Schedule” defined below;

**(6.d) System Release Schedule**

- Standard System Release Schedule:
  - NMS v.2 : Once every 2 months, or as needed
  - E2 : Once every 6 months, or as needed
- For mission critical issue(s):
  - Mission critical issues: are (1) system errors that, if not resolved, will cause a total failure of the system, or significantly impair the WB’s ability to continue using the system, or (2) system errors determined by Water Bureau management (with reasonable judgment) to be critical to WB needs
  - Mission critical items will be acknowledged by enfoTech within 2 hours of receipt. enfoTech will initiate the work immediately and keep MDIT/WB apprised of the progress.
  - Resolutions will be provided to MDIT/WB as soon as technically and feasibly possible by enfoTech.

**(7) Others**

1. MDIT/WB may renew said Agreement, for additional one-year periods, for a fee to be negotiated annually between MDIT/WB and enfoTech.
2. Additional on-site support is available, at the MDIT/WB’s request, for an additional charge.
3. The maintenance and support services are contingent upon proper use of the MDIT/WB’s hardware and the Licensed Programs and do not cover any portion of the Licensed Programs which have been modified without enfoTech’s approval.

4. enfoTech shall not be responsible to MDIT/WB for loss of use of the Licensed Programs or for any other liabilities arising from alterations, modifications, efficiency improvements, adjustments, or other changes which have been made to the Licensed Programs or its operating environment by other than authorized representatives of enfoTech. If, in the opinion of enfoTech, any such alterations, modifications, efficiency improvements, adjustments, or other changes adversely affect enfoTech's ability to render maintenance service to the Licensed Programs, enfoTech reserves the right to discontinue services required under this Agreement upon thirty (30) day's prior written notice to MDIT/WB.
5. Major system upgrades are not covered under this Agreement. The cost for major system upgrades will be negotiated between MDIT/WB and enfoTech at the time the upgrade becomes available.
6. Any service performed by enfoTech outside the scope of this Agreement shall be provided at enfoTech's prevailing rates for time, materials, and terms.

**(8) Service Rate**

This section provides a fee schedule for consulting services for work that is outside of the Annual Support Contract Agreement. All rates presented apply to services rendered during this Annual Support Contract Agreement period. Rates are subject to adjustment for subsequent Annual Technical Support Contract periods and will be negotiated with MDIT/WD before contract renewal.

**HOURLY RATES**

Charges for services provided will be in accordance with the following schedule:

<u>Classification</u>	<u>Hourly Rate (\$/hour)</u>
Principal Application Consultant	\$ 180
Principal System Consultant	\$ 180
Senior System QA/QC Consultant	\$ 160
Senior Application Consultant	\$ 150
Senior System Consultant	\$ 150
System QA/QC Consultant	\$ 130
Application Consultant	\$ 120
System Consultant	\$ 120
Business Support	\$ 90

STATE OF MICHIGAN  
 DEPARTMENT OF MANAGEMENT AND BUDGET  
 PURCHASING OPERATIONS  
 P.O. BOX 30026, LANSING, MI 48909  
 OR  
 530 W. ALLEGAN, LANSING, MI 48933

March 23, 2007

**CHANGE NOTICE NO. 12**  
**TO**  
**CONTRACT NO. 071B1001740**  
**between**  
**THE STATE OF MICHIGAN**  
**and**

NAME & ADDRESS OF VENDOR  <b>Enfotech &amp; Consulting, Inc.</b> <b>11 Princess Road, Unit A</b> <b>Lawrenceville, NJ 08648</b>  <b>tony_jeng@enfotech.com</b>	TELEPHONE Tony Jeng <b>(609) 896-9777</b>
	VENDOR NUMBER/MAIL CODE
	BUYER/CA (517) 241-3215 <b>Steve Motz</b>
Contract Compliance Inspector: Patty Bogard <b>Consulting Services for an Electronic Wastewater Discharge Reporting System –          Department of Environmental Quality</b>	
CONTRACT PERIOD: From: <b>August 27, 2001</b> To: <b>September 30, 2009</b>	
TERMS <b>N/A</b>	SHIPMENT <b>N/A</b>
F.O.B. <b>N/A</b>	SHIPPED FROM <b>N/A</b>
MINIMUM DELIVERY REQUIREMENTS <b>N/A</b>	

**NATURE OF CHANGE (S):**

Effective immediately this contract is hereby **INCREASED** by \$88,492.00 to provide funding for maintenance per the attached work statement and vendor proposal.

All other terms, conditions, specifications and pricing remain unchanged.

**AUTHORITY/REASON:**

Contract increase was approved at 2/20/2007 Administrative board.  
 Per vendor and agency agreement and DMB/Purchasing Operations approval.

**INCREASE: \$88,492.00**

**TOTAL REVISED ESTIMATED CONTRACT VALUE: \$5,192,835.00**

11 Princess Road, Unit A  
Lawrenceville, NJ 08648



Sales: 609.896-9777  
Support: 609.896.2627  
Fax: 609.896.2555  
[www.enfotech.com](http://www.enfotech.com)

October 31, 2006

Mr. William Creal  
Permits Section Chief, Water Bureau  
P.O. Box 30273  
Lansing, MI 48909-7773

**Subject: FY07 Annual Maintenance Proposal for enfoTech Supported Environmental Information Systems - NMS and E2 (for period from 10/1/2006 to 9/30/2007)**

Dear Mr. Creal:

enfoTech provides software development, installation, and support of environmental information systems for the DEQ under certain contracts. These contracts provide an option for the DEQ to retain enfoTech to provide system maintenance and support services after the systems go into production. This proposal provides a cost estimate for maintaining the DEQ systems till 9/30/2007. The following systems are covered under this maintenance agreement:

1. NMS
2. E2 for e-DMR and e-DWR

The total annual cost for system maintenance is \$ 188,492. A copy of the service agreement is included as Attachment A.

Thank you for the opportunity to present this cost proposal for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Tony C. Jeng".

Tony C. Jeng  
Executive Vice President

cc: File - MDEQ, Jeffrey Jones, Sony Su

## ATTACHMENT A: SERVICE AND SUPPORT AGREEMENT

### **(1) Overview**

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This Agreement is an annual technical support and maintenance program established between MDIT/WB and enfoTech for providing professional services to MDIT/WB for effective operation of the above systems used at the DEQ.

### **(2) Agreement Period:**

This Agreement will cover services immediately after a contract issue date to September 30, 2007.

### **(3) Fees and Payment:**

The annual support and maintenance fee for this Agreement is \$ 188,402. The fee is due, in full, at the onset of contract begin date.

It is recognized by DEQ and enfoTech that the System might continue to evolve and it is the intention of both parties to keep a similar time cycle for annual support and maintenance agreements in the future.

### **(4) Information Systems Covered Under This Agreement:**

Information Systems covered under this Service Agreement are listed below:

1. NMS
2. E2 for e-DMR and e-DWR

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**(7) Others**

1. MDIT/WB may renew said Agreement, for additional one-year periods, for a fee to be negotiated annually between MDIT/WB and enfoTech.
2. Additional on-site support is available, at the MDIT/WB's request, for an additional charge.
3. The maintenance and support services are contingent upon proper use of the MDIT/WB's hardware and the Licensed Programs and do not cover any portion of the Licensed Programs which have been modified without enfoTech's approval.

4. enfoTech shall not be responsible to MDIT/WB for loss of use of the Licensed Programs or for any other liabilities arising from alterations, modifications, efficiency improvements, adjustments, or other changes which have been made to the Licensed Programs or its operating environment by other than authorized representatives of enfoTech. If, in the opinion of enfoTech, any such alterations, modifications, efficiency improvements, adjustments, or other changes adversely affect enfoTech's ability to render maintenance service to the Licensed Programs, enfoTech reserves the right to discontinue services required under this Agreement upon thirty (30) day's prior written notice to MDIT/WB.
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Senior System QA/QC Consultant	\$ 160
Senior Application Consultant	\$ 150
Senior System Consultant	\$ 150
System QA/QC Consultant	\$ 130
Application Consultant	\$ 120
System Consultant	\$ 120
Business Support	\$ 90

STATE OF MICHIGAN  
 DEPARTMENT OF MANAGEMENT AND BUDGET  
 ACQUISITION SERVICES  
 P.O. BOX 30026, LANSING, MI 48909  
 OR  
 530 W. ALLEGAN, LANSING, MI 48933

June 15, 2005

**CHANGE NOTICE NO. 11**  
**TO**  
**CONTRACT NO. 071B1001740**  
**between**  
**THE STATE OF MICHIGAN**  
**and**

NAME & ADDRESS OF VENDOR  <b>Enfotech &amp; Consulting, Inc.</b> <b>11 Princess Road, Unit A</b> <b>Lawrenceville, NJ 08648</b>  <b>tony_jeng@enfotech.com</b>	TELEPHONE Tony Jeng <b>(609) 896-9777</b>
	VENDOR NUMBER/MAIL CODE
	BUYER/CA (517) 241-3215 <b>Steve Motz</b>
Contract Compliance Inspector: Patty Bogard <b>Consulting Services for an Electronic Wastewater Discharge Reporting System –          Department of Environmental Quality</b>	
CONTRACT PERIOD: From: <b>August 27, 2001</b> To: <b>September 30, 2009</b>	
TERMS <b>N/A</b>	SHIPMENT <b>N/A</b>
F.O.B. <b>N/A</b>	SHIPPED FROM <b>N/A</b>
MINIMUM DELIVERY REQUIREMENTS <b>N/A</b>	

**NATURE OF CHANGE (S):**

Effective immediately this contract is hereby **INCREASED** by \$692,570.00 per the attached work statement and vendor proposal.

**PLEASE NOTE:** The buyer for this contract has been **CHANGED** to Steve Motz.

All other terms, conditions, specifications and pricing remain unchanged.

**AUTHORITY/REASON:**

Per vendor and agency agreement and DMB/ACQUISITION SERVICES approval.

**INCREASE: \$692,570.00**

**TOTAL REVISED ESTIMATED CONTRACT VALUE: \$5,104,343.00**

**State of Michigan  
Department of  
Environmental Quality**

**Proposal for  
  
The Expansion of  
NMS and Node  
For FY05 Water Bureau Database  
Needs**

Prepared by

enfoTech & Consulting, Inc.  
11 Princess Road, Unit A  
Lawrenceville, New Jersey 08678  
Telephone: (609) 896-9777 • Fax: (609) 896-2555

Contact Person: Tony C. Jeng  
Executive Vice-President  
tony\_jeng@enfoTech.com

February 16, 2005

**enfoTech**



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## Executive Overview

The Water Bureau (WB) of the Michigan Department of Environmental Quality (MDEQ) has certain information technology needs in order to meet their FY05 water program objectives. The Division is exploring options to expand their existing Electronic Environmental Reporting System (E2), Michigan Node Client (Node), and the NPDES Management System (NMS) used by the Department to achieve those objectives. This proposal is prepared in response to DEQ's inquiry.

### (1) Summary of the Requirements:

Specifically, the Water Bureau is interested in expanding the above existing systems to support the following program needs:

1. Node for NPDES Reporting to EPA: Expansion of the Michigan Node Client to include Electronic Transfer of Permit Limits, Inspection Data, and Compliance Data from the NMS to EPA's Permit Compliance System (PCS) Database
2. NMS for Bio-solid Management: Expansion of NMS to support the Biosolids Program data management needs
3. NMS for Web Inquiry: Expansion of NMS to provide NPDES Permit Information Online to the general public via an NMS Online Web Inquiry System
4. NMS for Aquatic Nuisance Control: Expansion of NMS to Support Aquatic Nuisance Control Permitting
5. E2 for Online Renewal of Certificate of Coverage: Expansion of E2 System to enable Regulated Facilities to Renew Non-Storm Water Certificates of Coverage Permits Online
6. E2 Expansion for WaterChem Sample Data Update: Expansion of the E2 e-DWR system to allow the WD staff to search for samples contained in the WaterChem database and view and/or update the sample information.

### (2) Reasoning for Considering Existing System Expansion Approach:

Instead of developing new information technology projects from the ground-up to satisfy the above program needs, expanding upon the exiting successfully implemented projects will provide WB the following advantages:

1. Enhancing and expanding the NMS will help to consolidate the WB's data, reduce redundancy and improve work collaboration and data sharing throughout the Division
2. An integrated database allows the WB staff to respond to management and public inquiries more effectively
3. Re-using in-house technical expertise familiar with the existing systems to save costs
4. Re-using existing hardware/software resources (existing database server, software licenses, maintenance contracts, etc.) to save costs
5. Utilizing the exiting system functions, to the fully extent possible, to save costs
6. Reducing the learning/training curve associated with a new system
7. Expecting a stronger user/staff acceptance based on successful implementation experiences of existing systems
8. A better Return of Investment (ROI) results due cheaper development costs and a faster implementation schedule when compared with new and separate development options

(3) Summary of Expected Project Results:

This project is designed to build on Michigan's success with the existing systems (E2, Node, and NMS) and to expand the existing systems with the new functionalities that will provide continuous improvement to the current operations for efficiency and cost savings. By expanding on the already successfully implemented systems, the new functionalities will save valuable Water Bureau resources and will seamlessly provide additional services from Michigan government to the regulated community and general public. In summary, the Water Bureau expects to achieve the following project results:

- Save MDEQ resources used in the manual data entry of Issued Permits, Permit Limits, Inspection Data, and Compliance Data with electronic transfer of data from NMS into the PCS system
- Save MDEQ resources used in tracking of Biosolids information and Biosolids Annual Reports. Moreover, create the database foundation needed for future electronic transfers of biosolids data.
- Provide the regulated facilities and the general public with a fast, easy, and efficient way of retrieving NPDES Permit information online – a valued-added service from the State of Michigan to the regulated community and general public.
- Save MDEQ resources involved in the NPDES permit information requests under the Freedom of Information Act by allowing the general public to retrieve information online.
- Improve the overall effectiveness of the Aquatic Nuisance Control permitting program with faster response times for application processing, permit tracking, permit issuance, compliance assessment, enforcement support, and other water quality management decision-making.
- Provide the NPDES permit holders with a fast, easy, and efficient way of renewing the NPDES permits online. Also, reduce the facility compliance costs by offering a streamlined permit renewal option via readily available computer tools, reducing wait time, and eliminating the cost associated with the tracking/handling of renewal processes.
- Improve the overall effectiveness of the NPDES permit management program with faster responses for application renewals by eliminating the re-entry process associated with “paper” renewal applications. This can be achieved via applications that are pre-populated with the facility information contained in the NMS database. Also, improve the accuracy of renewal application data by eliminating potential errors that would be otherwise introduced through manual and/or redundant data entry.

In addition to the direct benefits associated with the expansion of the existing systems, there are other significant indirect savings/benefits that could not be easily quantified if a new IT project had to be developed from scratch. Examples of these indirect savings/benefits are illustrated below:

- Reduce the project development, testing, and implementation time frame,
- Reduce extensive system testing,
- Reduce potential risks commonly associated with a brand new IT project
- Reduce internal DIT and DEQ staff system and administrative training

**(4) Summary of the Project Cost**

This proposal will describe the general scope of work associated with the proposed deliverables for each of the project components outlined above. Specific details for each of the project components can be found in its Component Section, respectively. For each project component, we have included:

1. The Work Description
2. Deliverables
3. Timeframe Development
4. Draft Cost Estimate
5. Basis of Cost Estimate

A summary of the project cost for the development/expansion of these five components into the existing systems is summarized in the table below:

Component Description	Estimated Completion Time	Draft Costs Estimate
1.) Expansion of Michigan Node Client to include Electronic Transfer of Permit Limits, Inspection Data, and Compliance Data from the NMS to the PCS Database	4 months	\$ 106,800
2.) Expansion of NMS to Support Biosolids Program	3 months	\$ 65,600
3.) Expansion of NMS to provide NPDES Permit Information Online to the general public via NMS Online Web Inquiry System	4 months	\$126,530
4.) Expansion of NMS to Support Aquatic Nuisance Control Permitting	7 months	\$232,280
5.) Expansion of Electronic Environmental Reporting System (E2) that allows Facilities to Renew Non-Storm Water Certificates of Coverage Permit Online	3 months	\$116,660
6.) <u>E2 Expansion for WaterChem Sample Data Update:</u> Expansion of the E2 e-DWR system to allow the WD staff to search for samples contained in the WaterChem database and view and/or update the sample information.	6 weeks	\$ 44,700
<b>Total:</b>		<b>\$692,570</b>

The “Estimate Completion Time” is estimated based on the scope of work described in the following sections. All project components could take place concurrently, if desired by the Water Bureau. The actual completion time will be defined in a future project kickoff meeting with the Water Bureau staff.

**Component 1 - Node for NPDES Reporting to EPA: Electronic Issued Permits, Permit Limit, Inspection, and Compliance Data Loading from NMS to EPA**

**Work Description**

The Water Bureau (WB) has received a full delegation from the United States Environmental Protection Agency (USEPA) to administer the National Pollutant Discharge Elimination System (NPDES) program to permit and manage facilities that discharge wastewater to surface waterways in the State of Michigan. As part of the NPDES delegation, the WB is required to submit compliance information to the USEPA for all of its NPDES facilities, on a monthly basis.

The WB has a very strong commitment for NPDES compliance management, maintaining and good data quality, and has continued its efforts in supplying NPDES compliance data to the Water Permit Compliance System (PCS).

Since 1998, the WB has initiated an information technology project to manage statewide NPDES program information. In February 2002, the WB implemented Phase 1 of a statewide NPDES Information Management System (NMS). The NMS Phase 1 system provides Facility, Application, Permit, and Task Tracking modules and is being used by over 200 staff members. In the summer of 2002, the WB started the NMS Phase 2 project to expand system functions to include management of Discharge Monitoring Data (DMR) and Compliance/Enforcement Data.

It is the goal of the WB to maintain all NPDES related data in the NMS and to exchange its NPDES data with the PCS or Integrated Compliance Information System (ICIS) database (when it becomes available) via a standardized data exchange format set forth by the Exchange Network. In summary, the WB would like to enhance the existing NMS and E2 with the following capabilities:

1. Electronic Transfer of Issued Permit Date from the NMS to the PCS Database
2. Electronic Transfer of Permit Limits from the NMS to the PCS Database
3. Electronic Transfer of Inspection Data from the NMS to the PCS Database
4. Electronic Transfer of Compliance Data from the NMS to the PCS Database

Specific details about each of the items identified above will be discussed below:

**(1) Electronic Transfer of Issued Permits to PCS**

NPDES Permit application received are logged and processed in NMS. Michigan permit writers use the NMS to process and to generate the Permit Document. Currently, the Permits issued via NMS are manually re-keyed into the PCS. To streamline the data transfer process and to reduce the Michigan resources, the WB would also like to use its Michigan Node Client to move its issued-permit data to the Central Data Exchange (CDX) Node and eventually to the CDX-IDEF processor that transfers the data to the PCS database. This will involve the use of "Permit Document Type Definition (DTD)" to submit data to the PCS. Example issued-permit data elements to be transferred to PCS are shown below:

- Permit number
- Permitting dates (issued, effective, expiration, application due)
- Permittee name
- Permittee address
- Designated facility name
- Facility name
- Facility location information
- Facility type
- Facility ownership type
- SICs
- Facility/Permit Contact information
- Monitoring points
- Outfalls locations (lat/long)
- District indicator
- Wastewater type

- Wastewater flows
- Superseded permit(s) (if applicable)

## (2) Electronic Transfer of Permit Limits to PCS

Michigan permit writers use the NMS to login the permit limits. These permit limits are used to generate the Discharge Monitoring Report (DMR) form and to evaluate the reports for violations against the DMR data received. Currently, the Permit Limits are manually keyed into the PCS. To streamline the data transfer process and to reduce the compliance cost for the State of Michigan, the WB would also like to use its Michigan Node Client to move its Permit Limits to the Central Data Exchange (CDX) Node and eventually to the CDX-IDEF processor that transfers the data to the PCS database. This will involve the use of “Permit Limit Document Type Definition (DTD)” to submit data to the PCS. Example permit limits data elements (parameter specific monitoring requirements used to develop/generate Discharge Monitoring Report) are shown below:

- Parameter name
- Monitoring frequency
- Load/Concentration limits
- Load/Concentration units
- Statistical Base Code (SBC)
- Sample type

## (3) Electronic Transfer of Inspection Data to PCS

Inspections are planned, tracked, and maintained in the NMS. Once an inspection is completed, the inspection data listed below can be transferred from NMS to PCS electronically:

- Inspection Date
- Inspection Type
- Permit Reviewed
- Transmittal Date
- Transmittal Closed Date
- IPP Inspection Details

Currently, the inspection data is manually keyed into the PCS. To streamline the inspection data transfer process and to reduce the compliance cost for the State of Michigan, the WB would also like to use its Michigan Node Client to move its Inspection Data to the CDX Node and eventually to the CDX-IDEF processor that transfers the data to the PCS database. This will involve the use of “Inspection DTD” and “Inspection Schedule DTD” to submit data to the PCS.

## (4) Electronic Transfer of Compliance Data to PCS

The NMS provides compliance and enforcement functions for the tracking of compliance schedules, violations, and enforcement data. Compliance data listed below are currently transferred to the PCS via manual data entry:

- Permit/Enforcement Compliance Schedule
- Schedule Due Date
- Schedule Received Date
- Schedule Compliance Date
- Enforcement Type
- Enforcement Issue Date
- Enforcement Compliance Date
- Violation Details

Instead of manually keying- the data into the PCS, the WB would like to streamline the data transfer process between the State of Michigan and the USEPA via the use of the Michigan Node Client. Specifically, the WB would also like to use its Michigan Node Client to move its Compliance Data to the CDX Node and eventually to the CDX-IDEF processor that transfers the data to the PCS database. This will involve the use of “Enforcement Action DTD”, “Enforcement Action DTD”, “Measurement Violation DTD”, “Compliance Schedule DTD”, and “Compliance Schedule Violation DTD” to submit data to PCS.

**Deliverables**

This Project shall consist of the following two major deliverables:

1. Develop a web-service based data transfer mechanism for transmitting the Permit Limits, Inspection Data, and Compliance Data from the NMS to the PCS Database via the use of the Michigan Node Client and the CDX Node
2. Layout the foundation for the future expansion into the ICIS. This is done by developing a specification document that describes the XML file format and web-services method(s) to be used by the Node for future data transmission to the ICIS.

This project component will develop a mechanism to transmit Issued Permits, Permit Limits, Inspection Data, and Compliance Data to PCS via the Michigan Node to the CDX Node. The XML schema based format will be used in the anticipation of the up-coming ICIS. This will be very beneficial in the near future when the PCS is phased out and the IDEF format becomes obsolete in the coming years.

<b>Develop an XML and web-service based mechanism to transmit the Issued Permits, Permit Limits, Inspections, and Enforcements Data to PCS</b>	
	<b>Deliverable Description</b>
	Develop a mechanism to convert the NMS Issued Permits, Permit Limits, Inspections, and Compliance data to the XML schema format compatible with the Exchange Network standards. Convert the XML files into IDEF file format compatible with PCS.
	Develop a mechanism to transmit the NMS Issued Permits, Permit Limits, Inspections, and Compliance data to the CDX via Node
	Update the NMS Database to track the transmission status of the NMS Issued Permits, Permit Limits, Inspections, and Compliance data submitted to the CDX
	Develop Data Flow Configuration Documentation

**Development a Timeline**

We estimate that the development for the “electronic Issued Permits, Permit Limit, Inspection, and Compliance Data Loading from NMS to EPA” can be completed within 4 months. A detailed project plan will be developed at the onset of the project kickoff. A preliminary timeline for major deliverables is illustrated below:

<b>PROJECT DELIVERABLES</b>	<b>Completion Dates</b>
-----------------------------	-------------------------

PROJECT DELIVERABLES	y Completion Dates
1. A mechanism to flow Issued Permits, Permit Limit, Inspection, and Compliance data to the PCS via Node	3 to 4 months from project kick-off

**Cost Estimate**

The cost estimate for the “Electronic Issued Permits, Permit Limit, Inspection Data, and Compliance Data Loading from NMS to EPA” is summarized as follow:

Task Description	Contracting Service	
	Expense	Cost
<b>(A) Project Management/ Traveling Expenses</b>		
(1) Project Management, Communication, Reporting, Coordination, etc.		\$9,600
(2) Project Plan Development		\$1,200
(3) WebEx Cost for Project Discussion	\$ 2,000	
(4) Three 1-day On-Site Visitation	\$ 3,600	\$3,600
(5) Other Direct Costs		\$1,440
Subtotal:	\$5,600	\$15,840
<b>Cost for Task (A):</b>		<b>\$21,440</b>
<b>(B) One-Time Code Table Synchronization</b>		
(1) Code Inventory, Data Mapping Tables, and Data Population		\$8,000
(2) Other Direct Costs		\$800
Subtotal:		\$8,800
<b>Cost for Task (B):</b>		<b>\$8,800</b>
<b>(C) PCS Data Uploading Process Mechanism</b>		
(1) Develop XML Schema for Issued Permit, Limit, Inspection, and Enforcement data elements		\$8,000
(2) Develop a Data Query Program to Convert NMS Data into XML Instance File		\$22,000
(3) Develop a Converter to Convert Data IDEF DTD Format		\$7,200
(4) Develop a Tracking Mechanism in NMS for Tracking Data Uploading Status		\$9,600
(5) Develop an Expand Michigan Node for Web-Service Methods for Issued Permit, Limits, Inspection, and Enforcement data. Pilot Testing Transaction and refine Mechanism.		\$7,200
(6) Finalize Data Loading Mechanism		\$7,200
(7) Document the Data Loading Mechanism		\$8,400
(8) Other Direct Costs		\$6,960
Subtotal:		\$76,560
<b>Cost for Task (C):</b>		<b>\$76,560</b>
<b>Grand Total (A+B+C+D):</b>	<b>\$106,800</b>	

**2.5 Basis of Cost Estimate:**

This estimate is prepared with the following assumptions/conditions:

- Existing Michigan Node and the e-DMR data flow mechanism will be re-used/enhanced to flow Issued Permits, Permit Limit, Inspection Data, and Compliance data to the PCS
- The specification document that describes the XML file format and web-services method(s) to be used by the Node for future data transmission to the ICIS-NPDES will not be developed. It will be developed after EPA’s ICIS is ready to accept the data.

**Component 2 - NMS for Biosolids Management: Expansion of NMS to Support Biosolids Program**

**Work Description**

Facilities that generate and/or apply biosolids in the State of Michigan under the NPDES permit are required to submit the “Biosolids Annual Report”. The Biosolids Annual Report is specified on the Residuals Management Programs (RMPs) as required by the provisions of the NPDES Permit. As part of the NPDES delegation, the WB is required to submit monitoring data from the biosolids annual report to the USEPA. WB would like to expand the NMS to support the Biosolids Program by adding the following functionalities:

1. Tracking of the Biosolids Program Specific Data in NMS
2. Tracking of Biosolids Annual Report in NMS

Specific details relating to items 1 and 2 above are discussed below:

**(1) Tracking of the Biosolids Program Specific Data in NMS**

The WB issues Biosolids Permits (i.e. Biosolids Certificate of Coverage under the Biosolids General Permit) to facilities that generate biosolids and/or land apply biosolids. Currently, the NMS only records the minimum required permitting data on these facilities for the issuance of Biosolids Permit. Specific data collected for the Biosolids Program under the NPDES guidelines are not tracked in the NMS. These data are:

- Residuals Management Program (RMP) Details
- Biosolids Applied Sites

Specific biosolids data shown above will be tracked in NMS via the Biosolids Tab on the Facility Maintenance Screen.

**(2) Tracking of the Biosolids Annual Report in NMS**

The submittal of a Residuals Management Program for State approval is specified on the Biosolids Permit. Moreover, as a permit condition, the facility is required to submit the Biosolids Annual Report. The Biosolids Annual Report summarizes the amount of biosolids produced, how biosolids are treated, and how the biosolids are disposed.

The WB would like to expand the NMS to track the Biosolids Annual Reports data in the NMS. Specifically, the new Biosolids Annual Report Module will:

- Provide “step-by-step” data entry screens that are capable of capturing the data on the “paper” Biosolids Annual Report submitted by the facility
- Provide a function that will allow attachments submitted with the Biosolids Annual Report to be saved together in NMS
- Provide a function that allow the NMS user to print the Biosolids Annual Report saved in the NMS
- Provide a compliance evaluation function that system generates violation records for the “locked” Biosolids Annual Report against the permit limits
- Provide a system auto-update function that updates the Biosolids Annual Report Schedule’s status and date of receipt when a Biosolids Annual Report is entered into the NMS

By having this information stored in the NMS database, the information becomes accessible to all MI staff members that have an account in the NMS. The MI staff members can instantly lookup an RMP and/or Biosolids Annual Report as soon as it is entered into the NMS. Moreover, the NMS can be used to assist the MI staff to track the RMP and Biosolids Annual Report due date and its approval status.

Currently, the biosolids monitoring data is manually keyed into the PCS once the biosolids annual report is received. By adding this new module into the NMS to track the biosolids annual report, WB is laying the foundation for the future electronic data exchange of the biosolids monitoring data from the NMS to the PCS Database.

**Deliverables**

This Project shall consist of the following two major deliverables:

1. Develop a Biosolids Tab in NMS for the tracking of Biosolids Data
2. Develop a Biosolids Annual Report Data Entry Module

Specific deliverables are summarized in the table as shown below:

	<b>Deliverable Description</b>
	Add New tables to the NMS Water_02 database to Support Biosolids Data and Biosolids Annual Reports
	Develop a new Biosolids Tab on the Facility Maintenance Screen to track: <ul style="list-style-type: none"> <li>• Residuals Management Program (RMP)Details</li> <li>• Biosolids Applied Sites</li> </ul>
	Develop a new Biosolids Annual Report Data Entry Module to track annual reports submitted by the facility.

**Development Timeline**

We estimate that the project shall be completed within 3 months. A detailed project plan will be developed at the onset of the project kickoff. A preliminary project timeline for major deliverables is listed below:

<b>PROJECT DELIVERABLES</b>	<b>Preliminary Completion Dates</b>
1. Biosolids data tracking capability in NMS Biosolids Tab	1 month from project kick-off
2. Biosolids Annual Report tracking module in NMS	2 to 3 month from project kick-off

**Cost Estimate**

The cost estimate for the “Expansion of NMS to the Support Biosolids Program” is \$ 65,600. The detailed cost breakdown for the estimate is provided below:

Task Description	Contracting Service	
	Expense	Cost
<b>(A) Project Management/ Traveling expenses</b>		
(1) Project Management, Communication, Reporting, Coordination, etc.		\$3,600
(2) Project Plan Development		\$1,200
(3) WebEx Cost for Project Discussion	\$2,000	
(4) Three 2-days On-Site Visitation	\$3,600	\$7,200
(5) Other Direct Costs		\$1,200
Subtotal:	\$5,600	\$13,200
<b>Cost for Task (A):</b>		<b>\$18,800</b>
<b>(B) Biosolids Data Tracking Specification - Functional Requirements, Screens Design, and Database Development</b>		
(1) Develop a Detailed Functional Requirement Spec document with Draft Screen Design		\$6,000
(2) Design and Implement database changes to NMS database to store Biosolids Data and Biosolids Annual Report Details		\$3,600
(3) Other Direct Cost		\$ 960
Subtotal:		\$10,560
<b>Cost for Task (B):</b>		<b>\$10,560</b>
<b>(C) Biosolids Program Specific Data Tracking Module</b>		
(1) Develop a new Biosolids Tab on the Facility Maintenance Screen to track Residuals Management Program (RMP)Details and Biosolids Applied Sites		N/C
Subtotal:		N/C
<b>Cost for Task (C):</b>		<b>N/C</b>
<b>(D) Biosolids Annual Report Tracking Module</b>		
(1) Provide Data Entry Capability for Data Entry of Submitted “paper” Biosolids Annual Reports (EPQ 5856, 7 pages)		\$14,400
(2) Provide a Function that Allows Attachments Submitted with the Biosolids Annual Report to be Saved Together in NMS		\$3,600
(3) Provide a Function that Allow the NMS User to Print the Biosolids Annual Report Saved in the NMS		\$4,800
(4) Provide a Compliance Evaluation Function that System Generate Violation Records for the “locked” Biosolids Annual Report Against the Permit Limits		\$6,600
(5) Provide a System Auto-update function that Updates the Biosolids Annual Report Schedule’s Status and Receipt Date when a Biosolids Annual Report is Entered into the NMS		\$3,600
(6) Other Direct Costs		\$3,240
Subtotal:		\$36,240
<b>Cost for Task (D):</b>		<b>\$36,240</b>
<b>Grand Total (A+B+C+D):</b>		<b>\$65,600</b>

**Basis of Cost Estimate:**

This estimate is prepared with the following assumptions and conditions:

1. Biosolids Annual Report, EQP 5865, is used to prepare the cost estimate
2. The data entry form for Section V, “Monitoring Data Summary”, is to be populated based on the permit limits stored on the PM\_PERMIT\_LIMIT table for the selected permit

3. Population of the biosolids permit limits are MI permit writer's responsibility
4. There is no "Unit Conversion" required during the compliance evaluation

**Component 3 – NMS for Web Inquiry: NMS Online Web Inquiry System**

**Work Description**

The Michigan Department of Environmental Quality (MDEQ) is interest in developing an Internet-based electronic viewing and searching system for the National Pollutant Discharge Elimination System (NPDES) Permits processed and issued by the Department. Specifically, the Water Bureau is interested in a one-stop online source for accessing the most-updated NPDES Permitting Data manage by the State of Michigan. It is the Department’s goal that the public user with internet access will be able to view information that can be requested under the Freedom of Information Act (FOI):

- Permit Application Information (Processing status, received date, etc.)
- Issued Permit Information (Permit number, issued date, etc.)
- Issued Permit Document
- Facility Data (location, ownership, SIC/NAICS, etc)
- Discharge Monitoring Reports
- Inspections Conducted
- Enforcement Actions Issued

The search will based on specific search criteria (i.e. permit type, zip code, county, district, city, etc.) entered by the user. Furthermore, the proposed solution will be designed to use the content driven web pages and SQL Agent services to ensure that the most updated NPDES Permit information from NMS is made available to the public at a schedule defined by the program administrator.

In addition to publishing the most-updated data on the NPDES Permits issued, the NMS Online Web Inquiry System will also provide most-updated public notices information. When a draft permit is placed on “public noticed” in NMS, the draft permit information along with the following associated documents (in downloadable in PDF format) will be made available to the public via the NMS Online Web Inquiry System at schedule frequency:

- Public Notice Letter
- Draft Permit Document
- Submitted NPDES application<sup>1</sup>
- Permit Fact Sheet<sup>2</sup>
- Antidegradation Demonstration or Cooperative Agreement<sup>3</sup>

Electronic public notice comments may be submitted (in email) to the permit processor by clicking on the permit processor's name.

This proposal describes the general scope of work with proposed deliverables for the NMS Online Web Inquiry System. In this proposal, we have included:

1. An Understanding of the Project Requirements
2. The Project Scope (products and services)
3. Deliverables
4. Development Timeline
5. A Draft Cost Estimate

enfoTech proposes to use ASP.NET for web page design, ADO.NET for database access, SQL Agent to execute stored procedures for the data synchronization between database, Adobe Acrobat and 3rd party toolset for converting the Word Permit document to PDF format, and .NET Framework for various underlining foundation development to accomplish this objective.

It is envisioned that this project will be accomplished as follows:

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<sup>1</sup> Only applications received after April 1, 2004 and saved in NMS as scanned PDF document is available online

<sup>2</sup> A fact sheet is available for facilities which discharge over 500,000 gallons per day, and facilities classified as "major" by the Environmental Protection Agency

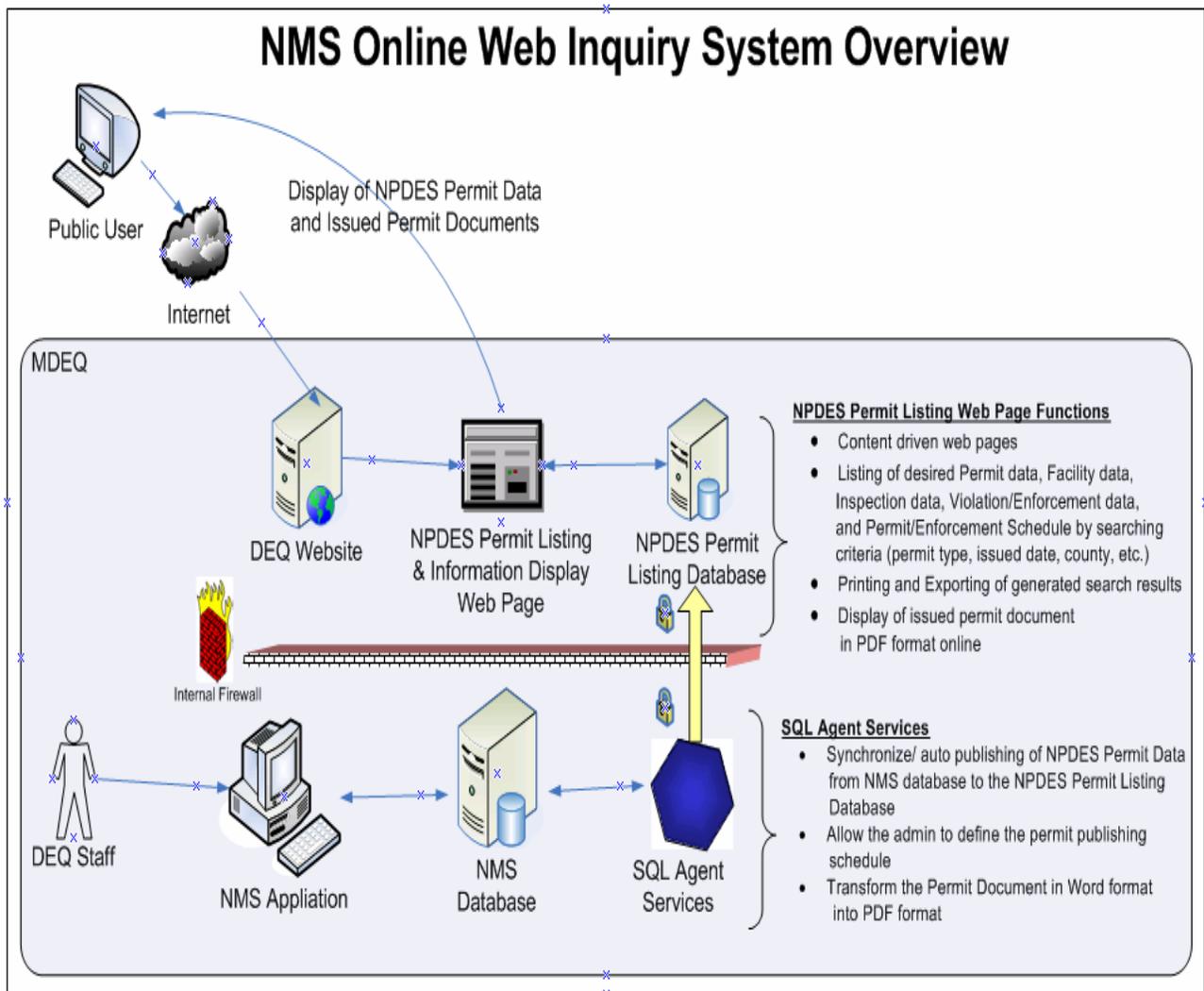
<sup>3</sup> An antidegradation demonstration is available for facilities which propose a new or increased discharge as required by Rule 323.1098. This document is available online if it is stored in NMS as scanned document in PDF format.

- Implementation of content driven web pages that allow the user to locate the desired NPDES permit information (permit, facility, inspection, discharge monitoring reports, and enforcement actions) via searchable criteria
- Implementation of "Recently Issued Permit Web Page" that list all issued permits for 60 days from the date of issuance.
- Publish the most updated NPDES permit information (with associated documents) online from NMS database by using the SQL Agent to execute the stored procedures at a schedule/frequency defined by the administrator
- Convert the document created in NPDES Management System (NMS) with Microsoft Word to be viewed only in PDF format
- Enhance the existing NMS system to allow Michigan Staff to specify which "document" is viewable online by the general public

**Understanding of the Project**

MDEQ currently provides an inventory of active NPDES Permits issued by the Department online in an Excel spreadsheet ([http://www.michigan.gov/deg/0,1607,7-135-3313\\_3682\\_3713-10780--,00.html](http://www.michigan.gov/deg/0,1607,7-135-3313_3682_3713-10780--,00.html)). The Excel spreadsheet is prepared manually on a periodic frequency from data stored in the NMS Water\_02 Database. The MDEQ would like to automate and streamline this process by developing a publicly available online viewing and searching solution for the NPDES Permits. Specifically, MDEQ is interested in providing a one-stop online source for public to access the most up-to-date NPDES Permitting information in the State of Michigan. The proposed "NMS Online Web Query System" will deliver an internet-based web interface to allow the user to retrieve the desired permit data and to view the associated permit document (in PDF format) based on the specific search criteria (i.e. permit type, zip code, county, district, city, etc.) entered by the user. Furthermore, the proposed solution will be designed to use the content driven web pages and SQL Agent Services to ensure that most updated NPDES Permit information are made available online to the public at an administrator defined publishing schedule.

This process is outlined in the diagram below:



**Scope of Work**

enfoTech proposes to deliver the following products and services to the MDEQ for the development and implementation of the NMS Online Web Inquiry System.

**(I) Project Management**

**1. Develop a Project Document with Abbreviated Requirements**

A project plan will be developed jointly by the MDEQ and enfoTech that will include the following:

- Project Overview
- Project Tasks and Descriptions
- Project Timeline
- Abbreviated Requirement Description

**(II) NMS Interface and Water\_02 Database Enhancements**

**2. Design Meeting:** Conduct site visits to the MDEQ to review and verify the proposed System Functionalities and to discuss the design enhancements.

**3. Modification of the Existing NMS Water\_02 Database:** Based on the modification required, tables on Water\_02 database may be modified. Moreover, the necessary data exchange tables for the web content may also be added.

**4. Add the new functionality that allows the NMS permit writers to define/mark which documents should be published online.** The existing NMS application will be updated with the required new functionalities. The new functionalities will continually be developed in a Microsoft .NET environment. Documents generated in NMS to be published online includes:

- Issued Permit Document
- Public Notice Letter
- Draft Permit Document for Public Notice
- Permit Fact Sheet
- Issued Inspection Document
- Issued Enforcement Action

**5. Installation & Administrator Training**

- A one-day on-site training session will be conducted with MDEQ staff and IT staff.
- Preparation of training materials

**(III) NPDES Permit Information Listing Web Page Development & Implementation**

**6. Design/Develop NPDES Permit Search and Listing Web Page**

enfoTech will work with the MDEQ staff to review the desirable data fields and search criteria to be included on the NPDES Permit Search and Listing Web Page. Initial review results the following potential data fields/search criteria:

- Designated Name
- Permit Number
- Major Flag
- Issue Date
- Effective Date
- Expiration Date
- District
- County
- Permittee Name
- Permittee Address 1
- Permittee Address 2
- Permittee City
- Permittee State
- Permittee Zip Code
- Facility Location Name 1
- Facility Location Name 2
- Facility Location Name 3
- Location Address 1
- Location Address 2

- Location City
- Location Zip Code
- Facility Location Latitude
- Facility Location Longitude
- Hydrologic Unit Code
- Receiving Water
- Wastewater Discharge Type

**7. Printing of the Search Results**

After the search criteria are entered, the system will generate a list of permits that satisfies the search criteria. The user will be given the printing function of the generated search result, if desired.

**8. Exporting of the Search Results**

After the search criteria are entered, the system will generate a list of permits that satisfy the search criteria. The user will be given a function to export the search results, if desired.

**9. Display of Documents Generated in NMS Online**

Once the user has located the desired permit/inspection/enforcement record, he/she can view the associated documents (generated/created in NMS as Word document) online in PDF format. The system will display the associated documents transformed from the original Word documents to the public in PDF format. Following documents generated/created in NMS as Word documents will be made available to the public in PDF format:

- Issued Permit Document
- Public Notice Letter
- Draft Permit Document for Public Notice
- Permit Fact Sheet
- Issued Inspection Document
- Issued Enforcement Action

**10. Display of Documents Attached/Stored in NMS Online**

Once the user has located the desired permit/inspection/enforcement record, he/she can view the associated PDF documents that are attached/stored in NMS online in its original PDF format. Following are example PDF documents to be made available online:

- Antidegradation Demonstration stored in NMS as scanned document in PDF format
- Cooperative Agreement stored in NMS as scanned document in PDF format
- Submitted NPDES application saved in NMS as PDF file

**11. Design/Develop Permit Application (Supplication) Information Display Web Page**

enfoTech will work with MDEQ staff to review the desirable data fields to be displayed on the Permit Application Information Display Web Page. Initial review results in the following potential data elements:

- Application Received Date
- Application Processing Status
- Application On-Hold Reasons
- Application Comments

**12. Design/Develop Permit Information Display Web Page**

enfoTech will work with MDEQ staff to review the desirable data fields to be displayed on the Permit Information Display Web Page. Initial review results in the following potential data elements:

- Permit Number
- Permit Type
- Issue Date
- Effective Date

- Expiration Date
- Permittee
- Permittee Name
- Permittee Address 1
- Permittee Address 2
- Permittee City
- Permittee State
- Permittee Zip Code
- Issued Permit Document (in PDF format)
- Public Notice Letter (in PDF format)
- Draft Permit Document for Public Notice (in PDF format)
- Permit Fact Sheet (in PDF format)
- Antidegradation Demonstration or Cooperative Agreement (in PDF format)

**13. Design/Develop Facility Information Display Web Page**

enfoTech will work with the MDEQ staff to review the desirable data fields to be displayed on the Facility Information Display Web Page. Initial review results in the following potential data elements:

- Designated Name
- Major Flag
- District
- County
- Facility Location Name 1
- Facility Location Name 2
- Facility Location Name 3
- Location Address 1
- Location Address 2
- Location City
- Location Zip Code
- Facility Location Latitude
- Facility Location Longitude
- Hydrologic/Segment Unit Code
- SIC/NAICS
- Nature of Business

**14. Design/Develop Inspection Information Display Web Page**

enfoTech will work with the MDEQ staff to review the desirable data fields to be displayed on the Inspection Information Display Web Page. Initial review results in the following potential data elements:

- Designated Facility Name
- Inspection Date
- District
- County
- Inspector
- Inspection Type
- Inspection Results/Comments
- Issued Inspection Document (in PDF format)

**15. Design/Develop Enforcement Actions Information Display Web Page**

enfoTech will work with the MDEQ staff to review the desirable data fields to be displayed on the Enforcement Actions Information Display Web Page. Initial review results in the following potential data elements:

- Designated Facility Name

- Permit Number
- Parameter Name
- Sample Result/Unit
- Permit Limit/Unit
- Reporting Period
- Enforcement Number
- Enforcement Type
- Enforcement Issued Date
- Enforcement Summary
- Issued Enforcement Action Document (in PDF format)

**16. Design/Develop Discharge Monitoring Report (DMR) Display Web Page**

Discharge monitoring reports submitted by the facilities and saved in NMS can be displayed on the DMR Information Display Web Page once the records are locked and approved for public viewing online in NMS. Both monthly and daily DMR will be available for review online based on the facility, permit, and reporting period selected.

**17. Design/Develop Geographical Region Selection Function**

By using Michigan District and County geographical map, we can provide a geographical region selection function to the NPDES Permit Search and Listing Web Page. When the user selects the desired District and County from the map online, the system will display/list all existing and proposed facilities based on the District and County selected. Clicking on a particular facility from the list would give the viewer access the facility's information (permits, inspections, DMRs, enforcement actions, etc.) as well as the available published documents.

Please note that the WD permit staff has expressed the idea to incorporate a comprehensive GIS mapping and search capability within the NMS Online Inquiry System (similar capability offered by the Michigan's Center of Geographic Information plus displaying multiple locations on one map). The idea is to display the NPDES permitted facilities on the Michigan Map denoted by icons (e.g. permit type, facility type, etc) and layered in geographical features (e.g. watershed, receiving water, etc). Our preliminary investigation indicates that we need to gather additional information on the existing Michigan GIS infrastructure (e.g. availability of geographical data source, mapping software used, etc.) in order to determine the best development approach. We recommend to reuse the existing GIS infrastructure, if possible, to lower the development cost. If the existing GIS infrastructure could not support this feature, we will present our technical recommendations with cost and delivery schedule to WD for consideration. As a result, this feature is not incorporated into the proposal as a deliverable. We will work with WD staff to investigate this feature further during the course of this project and address this feature as a potential phase 2 item.

**18. NPDES Permit Listing Web Page Documentation**

- Help Page
- User Guide
- Frequently Asked Questions

**(IV) Automated Public Notice Services Development & Implementation**

**19. Design & Development of Automated Public Notice Services**

When a draft permit is placed on "public notice" in NMS, the following associated public notice related documents (in downloadable in PDF format) will be made available to the public at schedule frequency:

- Public Notice Letter
- Draft Permit Document for Public Notice
- Permit Fact Sheet
- Antidegradation Demonstration stored in NMS as scanned document in PDF format
- Cooperative Agreement stored in NMS as scanned document in PDF format
- Submitted NPDES application saved in NMS as PDF file

The public user will also have the ability to submit comments electronically (via email) to the permit processor. An automated public notice service will also suspend the availability of the aforementioned public notice associated documents at the expiration of the public notice period.

### **(V) Recently Issued Permits Listing Web Page Development & Implementation**

#### **20. Design & Development of Recently Issued Permits Listing Web Page**

The NMS Online Web Inquiry System will provide a Recently Issued Permits Listing web page that list all issued permits for 60 days from the date of issuance. From this listing web page, the user will be able to access the other information display web page from the links displayed on the page for the desired issued permit record. Associated documents (in PDF format) will be available for in downloadable or viewing online on the Permit/Facility/Inspection/Violation/Enforcement /Schedule information display page (where applicable). As an example, the Permit information display web page will have the following documents available:

- Public Notice Letter
- Issued Permit Document
- Permit Fact Sheet
- Antidegradation Demonstration stored in NMS as scanned document in PDF format
- Cooperative Agreement stored in NMS as scanned document in PDF format
- Submitted NPDES application saved in NMS as PDF file

The Recently Issued Permits Listing web page will be data/content driven. It will auto update the issued permits list based on the data populated in the NPDE Permit Listing Database's data exchange tables and the issued date of the permit records.

### **(VI) SQL Agent Services Development & Implementation**

#### **21. Design & Development of Word to PDF Conversion Services**

enfoTech will use Adobe Acrobat and 3rd party toolset to convert the Word document generated in NMS to PDF format. A Word to PDF conversion service will be developed and used with SQL Agent to move the generated Word document in Word format to exchange table in PDF format. Generated Word documents to be converted to PDF format includes:

- Issued Permit Document
- Public Notice Letter
- Draft Permit Document for Public Notice
- Permit Fact Sheet
- Issued Inspection Document
- Issued Enforcement Action

#### **22. Design & Development of SQL Agent Services:**

Stored Procedures will be created and used in conjunction with the SQL Agent to

- 1.) Populate the required Permit, Public Notice, Facility, Inspection, Discharge Monitoring Report, and Enforcement information from multiple Water\_02 tables to the exchange tables in NMS database
- 2.) Populate the converted NMS Generated Word Document (in PDF format) from the Water\_02 tables to the exchange tables in NMS database
- 3.) Synchronize/populate the data on the exchange table in NMS Water\_02 database to the tables on the NPDE Permit Listing Database

#### **23. SQL Agent Services Documentation**

- User Guide
- Stored Procedures Documentation

**Deliverables**

**(I) Project Management**

1.A Project Plan Document

**(II) NMS Enhancements & Water\_02 Database Modification**

- 2.A one-day MDEQ staff review session to review and verify the proposed System Functionalities and to discuss the design enhancements in NMS
- 3.Modified Water\_02 database to support the new functionalities (including data dictionary updates)
- 4.Add a new functionality of marking which documents generated in NMS should be published online
- 5.Provide the stored procedures to populate the required Permit, Facility, Inspection, and Enforcement information from multiple Water\_02 tables into the exchange tables in NMS database
- 6.A one-day MDEQ administrator training session including training materials and system administration documentation

**(III) NPDES Permit Information Listing Web Page Development & Implementation**

- 7.Three two-day MDEQ staff review sessions to review and verify the proposed System Functionalities and to discuss the draft Web Pages
- 8.Develop NPDES Permit Search Web Page with searchable criteria
- 9.Develop NPDES Permit Search Result Listing Web Pages
- 10.Develop Permit Information Display Web Page
- 11.Develop Facility Information Display Web Page
- 12.Develop Inspection Information Display Web Page
- 13.Develop Enforcement Action Information Display Web Page
- 14.Develop Discharge Monitoring Report (DMR) Information Display Web Page
- 15.Develop a System Function for Geographical Region (District and County) Selection on the NPDES Permit Search Web Page
16. Develop a System Function for Printing of the Generated Search Result
- 17.Develop a System Function for Exporting of the Generated Search Result
- 18.Allow the user to display the following Word documents generated in NMS online in PDF format:
  - Issued Permit Document
  - Public Notice Letter
  - Draft Permit Document for Public Notice
  - Permit Fact Sheet
  - Issued Inspection Document
  - Issued Enforcement Action
- 19.A one-day MDEQ administrator training session including training materials and system administration documentation
- 20.One-year system integration support & maintenance

**(IV) Automated Public Notice Service Development & Implementation**

**21. Design & Development of automated public notice services to:**

- a. Populate the draft “public notice” permit information from multiple Water\_02 tables to the exchange tables in NMS database when a draft permit is placed on “public notice” in NMS. Also, publish the following associated public notice related documents (in downloadable in PDF format) online at schedule frequency:
  - Public Notice Letter
  - Draft Permit Document for Public Notice
  - Permit Fact Sheet
  - Antidegradation Demonstration/ Cooperative Agreement stored in NMS as scanned document in PDF format
  - Submitted NPDES application saved in NMS as PDF file
- b. Suspend the availability of the aforementioned public notice associated documents at the expiration of the public notice period.

**(V) Recently Issued Permits Listing Web Page Development & Implementation**

**22. Design & Development of Recently Issued Permits Listing Web Page to:**

- a. Provide a list of the issued permits for 60 days from the date of issuance. From this listing web page, the user will be able to access other information display web page from the links displayed on the page for the desired issued permit record. Associated documents (in PDF format) will be available for in downloadable or viewing online on the Permit/Facility/Inspection/Violation/Enforcement/Schedule information display page (where applicable).
- b. The Recently Issued Permits Listing web page will be data/content driven. It will auto update the issued permits list based on the data populated in the NPDE Permit Listing Database’s data exchange tables and the issued date of the permit records.

**(VI) Stored Procedures/SQL Agent Services Implementation**

**23. Design & Development of Word to PDF Conversion Services**

**24. Design & Development of Stored Procedures that will be used in conjunction with the SQL Agent to:**

- a. Populate the Permit/Facility/Inspection/Violation/Enforcement/Schedule information from multiple Water\_02 tables to the exchange tables in NMS database
- b. Populate the Issued Permit information from multiple Water\_02 tables to the exchange tables in NMS database
- c. Populate the converted Permit Document (in PDF format) from the Water\_02 tables to the exchange tables in NMS database
- d. Synchronize/populate the data on the exchange table in NMS database to the tables on the NPDE Permit Information Database on the Web Server

**25. Provide documentation on the use of Stored Procedures with the SQL Agent**

**Development Timeline**

We estimate that the project shall be completed within 4 months. A preliminary project timeline for major deliverables is listed below:

PROJECT DELIVERABLES	Preliminary Completion Dates
1. NMS Online Web Inquiry System	4 to 5 months from project kick-off

**Cost Estimate for the NMS Web Inquiry System**

The following tables provide a summary of cost estimates for each deliverable proposed above.

Task Description	Expense	Contracting Service
		Cost
<b>(A) Project Management</b>		
(1) Project Management, Communication, Reporting, Coordination, etc.		\$3,600
(2) Project Plan Development		\$1,200
(3) WebEx Cost for Project Discussion	\$2,000	
(4) Other Direct Costs		\$480
Subtotal:	\$2,000	\$5,280
<b>Cost for Task (A):</b>		<b>\$7,280</b>
<b>(B) NMS Enhancements &amp; Water_02 Database Modification</b>		
(1) Onsite Gathering of Functional Requirements (1 day)	\$1,000	\$1,200
(2) Modifications to existing NMS Water_02 Database and add the required data exchange table for the web pages		\$4,800
(3) Add a new functionality to marking which documents generated in NMS should be published online		\$6,000
(4) DEQ Staff User Training	\$1,000	\$1,200
(5) Other Direct Costs		\$1,320
Subtotal:	\$2,000	\$14,520
<b>Cost for Task (B):</b>		<b>\$16,520</b>
<b>(C) NMS Online Web Inquiry System Development &amp; Implementation</b>		
(1) Three 2-days Onsite gathering of Functional Requirements	\$3,600	\$7,200
(2) Develop Permit Search Web Page with searchable criteria		\$6,000
(3) Develop Permit Search Result Listing Web Pages		\$3,000
(4) Develop Permit Application Information Display Web Pages		\$3,000
(5) Develop Permit Information Display Web Pages		\$3,000
(6) Develop Facility Information Display Web Pages		\$3,000
(7) Develop Inspection Information Display Web Pages		\$3,000
(8) Develop Enforcement Information Display Web Pages		\$3,000
(9) Develop Public Notice Information Display Web Page		\$2,400
(10) Develop Monthly and Daily DMR Display Web Page.		\$4,800
(11) Develop a System Function for Geographical Region (District and County) Selection on the Permit Search Web Page		\$6,000
(12) Develop a System Function for Printing of the Generated Search Result		\$1,500
(13) Develop a System Function for Exporting of the Generated Search Result		\$2,400
(14) Allow the User to Display/Print/Save NMS generated Word Documents Online in PDF Format: <ul style="list-style-type: none"> <li>• Issued Permit Document</li> <li>• Public Notice Letter</li> <li>• Draft Permit Document for Public Notice</li> <li>• Permit Fact Sheet</li> <li>• Issued Inspection Document</li> <li>• Issued Enforcement Action</li> </ul>		\$3,200
(15) Provide user instructions, help pages, and frequently asked question page for the NMS Online Web Inquiry System		\$2,400
(16) A one-day MDEQ administrator training session including training material	\$1,000	\$2,400
(17) Final System Installation, Configuration in production environment	\$1,000	\$1,200
(18) Other Direct Costs		\$5,670
Subtotal:	\$5,600	\$63,170

Task Description	Expense	Contracting Service
		Cost
<b>Cost for Task (C):</b>		<b>\$68,770</b>
<b>(D) Automated Public Notice Services Implementation</b>		
(1) Design & Development of automated public notice services to: populate the draft "public notice" permit information and associated public notice related documents from multiple Water_02 tables to the exchange tables in NMS database when a draft permit is placed on "public notice" in NMS.		\$2,000
(2) Design & Development of automated public notice services to suspend the availability of the aforementioned public notice associated documents at the expiration of the public notice period.		\$2,000
(3) Other Direct Costs		\$ 400
Subtotal:		\$4,400
<b>Cost for Task (D):</b>		<b>\$4,400</b>
<b>(E) Recently Issued Permits Listing Web Page Implementation</b>		
(1) Design & Development of Recently Issued Permits Listing Web Page to list the recently issued permits for 60 days from the date of issuance. From this listing web page, the user will be able to access other information display web page from the links displayed on the page for the desired issued permit record.		\$2,400
(2) Design & Development of data/content driven web page for the Recently Issued Permits Listing. The web page will auto update the issued permits list based on the data populated in the NPDE Permit Listing Database's data exchange tables and the issued date of the permit records.		\$2,400
(3) Other Direct Costs		\$ 480
Subtotal:		\$5,280
<b>Cost for Task (E):</b>		<b>\$5,280</b>
<b>(F) Stored Procedures/SQL Agent Services Implementation</b>		
(1) Design & Development of Word to PDF Conversion Services that convert the following documents generated in NMS: <ul style="list-style-type: none"> <li>• Issued Permit Document</li> <li>• Public Notice Letter</li> <li>• Draft Permit Document for Public Notice</li> <li>• Permit Fact Sheet</li> <li>• Issued Inspection Document</li> <li>• Issued Enforcement Action</li> </ul>		\$6,400
(2) Design & Development of the Stored Procedures to populate the required Permit, Facility, Inspection, Discharge Monitoring Report, and Enforcement information from multiple Water_02 tables into the exchange tables in NMS database		\$6,000
(3) Design & Development of Stored Procedures used in conjunction with the SQL Agent to move data on the data exchange tables from NMS Water_02 database to NPDES Permit Listing database		\$4,800
(4) Provide documentation on the use of Stored Procedures with SQL Agent		\$4,800
(5) Other Direct Costs		\$2,280
Subtotal:		\$24,280
<b>Cost for Task (F):</b>		<b>\$24,280</b>
<b>Grand Total (A+B+C+D+E+F):</b>		<b>\$126,530</b>

**Basis of Cost Estimate:**

This estimate is prepared with the following assumptions/conditions:

1. The estimates include the following 4 parts:
  - a. Implementation of content driven web pages that allow the user to locate and view the desired NPDES Permit data via searchable criteria
  - b. Publish the most updated NPDES Permit information (with permit document) from NMS database to NPDES Permit Listing Database by using the SQL Agent to execute the required stored procedures
  - c. Convert the permit document created in the NPDES Management System (NMS) with Word to be viewed only in PDF format
  - d. Enhance the existing NMS system to allow MI Staff to specify which “Issued Permit” is viewable online by the general public
2. The Permit Search Web Page contains no more than 20 searchable criteria. If more than 20 searchable criteria are needed, the development cost for the Permit Search Web Page will need to be adjusted accordingly.
3. The Web Page for Permit Application, Permit Data, Facility Data, Inspection Data, Violation Data, Enforcement Data, and Permit/Enforcement Schedule assumes that no more than 25 data elements will need to be displayed. If more than 25 data elements are needed, the development cost for the Information Display Web Page will need to be adjusted accordingly.
4. For the export function, enfoTech assumes that the State of Michigan have the necessary software licenses on the Web Application Server for Microsoft Excel.
5. Infrastructure related hardware and software costs are not included.

**Component 4 – NMS for Aquatic Nuisance Control: Expansion of NMS to Support Aquatic Nuisance Control Permitting**

**Work Description**

On October 11, 2004, the Department of Environmental Quality (DEQ)'s Inland Lakes and Streams Section conducted a meeting with William Creal (Manager of Surface Water Permit), Peter Ostlund (Manager of Field Operation), Jeff Jones (Staff of Lakes Erie & Huron Permits), and enfoTech to explore the feasibility of NMS expansion to support Aquatic Nuisance Control Permitting. This document, "Technical Options for the Expansion of NPDES Management System (NMS) version 2.0 to Support Aquatic Nuisance Control Permitting", is drafted in response to the DEQ's request resulting from the meeting.

**Aquatic Nuisance Control Permitting Background Information**

The Water Bureau's Inland Lakes and Remedial Action Unit of DEQ issues Aquatic Nuisance Control permits and receives treatment monitoring reports that are required by Part 33, Aquatic Nuisance Control of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451. Permits are required to control nuisance aquatic plants and swimmers' itch. Staff regulates the use of pesticides through the permit process and reviews and assesses new products for use in Michigan waters.

The Water Bureau issues Aquatic Nuisance Control permits and receives treatment monitoring information based on approximately 1600 Aquatic Nuisance Control permit applications submitted annually. It is the goal of the Water Bureau to issue timely authorization for control of aquatic nuisances. It is also the goal of the Water Bureau to monitor all treatment activities that are undertaken as a result of any Aquatic Nuisance Control permits issued.

Currently the DEQ Inland Lakes and Remedial Action Unit tracks all Aquatic Nuisance Control permitting information through a Microsoft Access program called Aquabase. Originating as a much smaller undertaking, Aquabase has been expanded multiple times over the years to provide new functionalities required for the Aquatic Nuisance Control permitting.

During the 10/11/2004 meeting, Inland Lakes and Streams staff member Laura Esman described that "due to an increase in program area staff using Aquabase, the expanded Aquabase program has proven to be unstable at times and in need of major structural changes (potentially a "re-write"). To keep Aquatic Nuisance Control permits issued on time, and to accurately track all permitting information, the Inland Lakes Unit staff needs the current Aquabase program updated or replaced".

**Compatibility Analysis between NMS and Aquabase Application**

In order to evaluate the feasibility of the expansion of NMS to support Aquatic Nuisance Control Permit’s data tracking needs, we must first evaluate the application features between the NMS and the Aquabase (the Aquatic Nuisance Control database) from the business process and the data management perspective. After a preliminary analysis, we present the following table to show the degree of compatibility between these permitting applications:

Information/ Functionalities	NMS 2.0	Aquabase
<b>Database</b>	SQL Server	MS Access for user interface and local database. Nightly data upload to SQL Server
<b>Permit</b>	<ul style="list-style-type: none"> <li>• Provide Step-by-Step Wizard process for NPDES and GW application data entry</li> <li>• Provide a Permit Module for comprehensive permitting data tracking</li> </ul>	<ul style="list-style-type: none"> <li>• Provide data entry screens for “Long” and “Expedited” Aquatic Nuisance Control application forms</li> </ul>
<b>Facility</b>	<ul style="list-style-type: none"> <li>• Provide a facility module for tracking of facility data</li> </ul>	able
<b>Payment Tracking</b>	<ul style="list-style-type: none"> <li>• Provide Payment Data Entry Screens and Payment Maintenance Screen for tracking of payment information</li> </ul>	<ul style="list-style-type: none"> <li>• Provide Payment Data Entry Screens for tracking of payment information</li> </ul>
<b>Supplication</b>	<ul style="list-style-type: none"> <li>• Provide an extensive supplication module for tracking of detailed application process. This includes placing the application “On-Hold” when required info is not received.</li> </ul>	<ul style="list-style-type: none"> <li>• Tracks date received, review completed, and application return reason</li> </ul>
<b>Water Body</b>	<ul style="list-style-type: none"> <li>• Provide “simple” data tracking for receiving water body</li> </ul>	<ul style="list-style-type: none"> <li>• Provide a comprehensive data tracking for Water body</li> </ul>
<b>Treatment Report</b>	Not Available	<ul style="list-style-type: none"> <li>• Track summary data only on the treatment report received</li> </ul>
<b>Document</b>	<ul style="list-style-type: none"> <li>• Generate the permit document via document template with Microsoft Word</li> </ul>	<ul style="list-style-type: none"> <li>• Generate the permit document via document template with Microsoft Word</li> </ul>
<b>Task Tracking</b>	<ul style="list-style-type: none"> <li>• Provide a comprehensive tasking module that include a “My Task” screen</li> </ul>	<ul style="list-style-type: none"> <li>• Track limited data:                             <ul style="list-style-type: none"> <li>▪ Date assigned</li> <li>▪ Reviewed by</li> </ul> </li> </ul>
<b>Inspection</b>	<ul style="list-style-type: none"> <li>• Provide a comprehensive inspection task module that includes an “Inspection Creation Wizard” and “Inspection Planning” screen</li> </ul>	<ul style="list-style-type: none"> <li>• Provide a survey tracking screen</li> </ul>
Information/ Functionalities	NMS 2.0	Aquabase
<b>Violation</b>	<ul style="list-style-type: none"> <li>• Provide a comprehensive violation tracking module</li> </ul>	Not available in Aquabase, but will be useful to the Program staff

<b>Enforcement</b>	<ul style="list-style-type: none"> <li>• Provide a comprehensive enforcement tracking module</li> </ul>	Not available in Aquabase, but will be useful to the Program staff
<b>Document Template</b>	<ul style="list-style-type: none"> <li>• Provide a comprehensive document template module that allows the Admin to define and create re-usable document templates</li> </ul>	Not available in Aquabase, but will be useful to the Program staff
<b>Permit Limit Template</b>	<ul style="list-style-type: none"> <li>• Provide a comprehensive permit limit template module that allows the Admin to define and create re-usable permit limit templates</li> </ul>	Not available in Aquabase, but will be useful to the Program staff
<b>Query Function</b>	<ul style="list-style-type: none"> <li>• Provide a comprehensive query module that allows the Admin to define and create re-usable sql query that can be executed within NMS applications</li> </ul>	Not available in Aquabase, but will be useful to the Program staff
<b>Report</b>	<ul style="list-style-type: none"> <li>• Provide a Ad Hoc Report module that allows the Admin to add self-created Crystal Reports that can be executed within NMS applications</li> </ul>	Not available in Aquabase, but will be useful to the Program staff
<b>Security</b>	<ul style="list-style-type: none"> <li>• Provide a comprehensive security module that allows the Admin to define security role, security group, and add/update security setting for users.</li> </ul>	Not available in Aquabase, but will be useful to the Program staff

Based on the similarity of data and functionalities shown above, the expansion of the NMS to support Aquatic Nuisance Control Permitting deserves closer examination and may be considered as a project option.

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**High Level Re-Usability Analysis of Existing NMS Functions for Aquatic Nuisance Control Permitting**

Due to the high degree of compatibility required for the data management needs of the NPDES and Aquatic Nuisance Control Programs, we have further identified the functional areas of the NMS that can be reused for Aquatic Nuisance Control permitting. Many of the existing NMS functional areas can be re-used or modified with minor effort to support Aquatic Nuisance Control permitting. The existing NMS functionalities that can be re-used include:

- 1.) Re-use existing **NMS database** with enhancements to support Aquatic Nuisance Control permitting. Additional data elements tracked by the Aquatic Nuisance Control permitting will be added.
- 2.) Re-use the existing **NMS Permitting Wizard** with enhancements to support “Long” and “Expedited” application forms used by Aquatic Nuisance Control Permit Application.
- 3.) Re-use existing **NMS permitting functionalities** with enhancements to issue Aquatic Nuisance Control Permit.
- 4.) Re-use existing **NMS supplication functionalities** with enhancements to track application process data associated with Aquatic Nuisance Control Permit Issuance.
- 5.) Re-use existing **NMS permit limit tracking/maintenance functionalities** with enhancements to define limits specified on the Aquatic Nuisance Control Permit
- 6.) Re-use the existing **NMS document functionalities** to create the desired document templates and to generate the desired permit documents.
- 7.) Re-use existing **NMS inspection tracking functionalities** with enhancements to support Aquatic Nuisance Control Permit Survey.
- 8.) Re-use existing **NMS violation functionalities** to perform compliance evaluation.
- 9.) Re-use existing **NMS enforcement functionalities** to issue enforcements.
- 10.) Re-use existing NMS tasking functionalities to track permitting tasks associated with the Aquatic Nuisance Control Permit.
- 11.) Re-use existing **NMS query functionalities** to retrieve the desired reports on the Aquatic Nuisance Control Permits.
- 12.) Re-use existing **NMS report functionalities** to generate the desired reports on the Aquatic Nuisance Control Permits.
- 13.) Re-use existing **NMS security functionalities** to define security group, role, and users.

**Advantages of Using NMS for Aquatic Nuisance Control Permitting**

If the existing NMS application is expanded to support Aquatic Nuisance Control permitting, the following benefits may be realized:

- 1.) **Database Management:**
  - a. Efficient Structural Database Storage of Aquatic Nuisance Control Permitting Information in the existing NMS database.
- 2.) **Permit Issuance and Management:**
  - a. The ability to issue Aquatic Nuisance Control Permits via the existing NMS permitting functionalities with enhancements.
  - b. A centralized document management system for Aquatic Nuisance Control Permit
  - c. Provide a proven application and data flow mechanism that is capable to support future expansions for electronic permit application submissions in the Electronic Environmental Reporting System (E2).
- 3.) **Monitoring and Reporting:**
  - a. The capability of storing complete “paper” treatment reports in NMS with enhancements
  - b. Provide a proven application and data flow mechanism for future expansion to electronic report submission in E2 (i.e. e-DMR, e-DWR)
- 4.) **Compliance and Enforcement:**
  - a. The ability to perform compliance evaluations with existing NMS functionalities.
- 5.) **Work Collaboration Process:**
  - a. Provide additional existing NMS functionalizes (i.e. My Task, Query, etc.) to Aquatic Nuisance Control permitting.
  - b. Streamline the compliance data review process by having the treatment report and Aquatic Nuisance Control Permit available through statewide NMS System.
  - c. Improve the overall effectiveness of the State’s Aquatic Nuisance Control permitting program with faster responses for permit review, data analyses, compliance assessment, enforcement support, and other water quality management decision-making
- 6.) **Enterprise-wide System Strategy for the Water Bureau:**
  - a. Save the Department’s application development costs by re-utilizing existing resources (NMS).
  - b. Save the Department’s staff training costs by using one application to track GW, NPDES, and Aquatic Nuisance Control Permit within the Department.

Some of the listed advantages are further explained in the following sections to provide additional details to allow the DEQ to gain some preliminary estimate of potential savings.

## **Savings of Applying Existing NMS Database to Track Aquatic Nuisance Control Permits**

By using the NMS application, the Aquatic Nuisance Control permitting will re-use the existing NMS Water\_02 database structure currently used to support the NPDES Permitting. Specifically, a copy of the NMS Water\_02 database will be expanded and used to track all the Aquatic Nuisance Control Permitting Information. An NMS application user can view both NPDES Permit and Aquatic Nuisance Control Permit information by switching the database connection. There is no significant re-training required for the existing NMS application user to view/track the Aquatic Nuisance Control permit in the expanded NMS.

We estimate the following savings in the database development in terms of man-hours when an existing NMS database is used to track Aquatic Nuisance Control Permits instead of creating a new database: 720 hours.

This estimate is based on the assumption of re-creating a new Aquabase database, from scratch, that is similar to NMS Water\_02 database.

## **Savings of using existing NMS permitting functionalities to Issue Permits**

The following existing NMS permitting modules can be utilized to issue Aquatic Nuisance Control Permit with minor enhancements/modifications:

- Permitting Wizard: The existing NMS “Permitting Wizard” that provides a simple walk-through process for permit data entry can be modified to support the “Long” and “Expedited” Aquatic Nuisance Control Permit Application.
- Permit Module: The existing NMS “Permit Module” that provides an easy access to all permitting information can be modified to track additional data elements used by the Aquatic Nuisance Control Permit.
- Permit Limits Module: The existing NMS “Permit Limits Module” can be used to track/display Treatment Limits associated with an Aquatic Nuisance Control permit
- Facility Module: The existing NMS “Facility Module” can be used to track Water body Information by adding the additional data elements used by the Aquatic Nuisance Control Permit.
- Supplication Module: The existing NMS “Supplication Module” is used to track the data associated with the processing of an application
- Inspection Module: The existing NMS “Inspection Module” can be used to track Survey information on the Water body with the additional data elements used by the Aquatic Nuisance Control Permit added.

We estimate the cost savings in the application development in terms of man-hours when existing NMS permitting functions are used to issue Aquatic Nuisance Control Permits is about: 1,200 hours.

This estimate is based on the assumption of re-creating a new NMS application with compatible functionalities to support Aquatic Nuisance Control Permitting.

## **Savings of using existing NMS functionalities to perform Compliance Evaluation**

The following existing NMS compliance evaluation modules can be utilized to track Violations and Enforcements for the Aquatic Nuisance Control Permit without enhancement/modification:

- Violation Module: The exiting NMS “Violation Module” provides the violation creation and tracking function for the Aquatic Nuisance Control Permit.
- Enforcement Module: The exiting NMS “Enforcement Module” provides the enforcement creation and tracking function for the Aquatic Nuisance Control Permit.

We estimate the savings in the compliance evaluation development in terms of man-hours when existing NMS functions are used to perform compliance evaluation is about: 2,400 hours

This estimate is based on the assumption of re-creating a NMS compatible application to support compliance evaluation needed by the Aquatic Nuisance Control Permit.

To account for other savings not identified above, we estimate additional 5,600 hours might be required to develop a complete compatible NMS application for Aquatic Nuisance Control Permitting. Overall, we estimate that a total of 9,920 hours would be needed to develop a new Aquatic Nuisance Control Permit database system that is compatible with NMS capabilities.

In addition, there are other significant indirect savings/benefits that cannot be easily quantified for a new IT project developed from scratch. Examples of these indirect savings/benefits are illustrated below:

- Reduce project development, testing, and implementation time frame,
- Reduce extensive system testing,
- Reduce potential risks commonly associated with a brand new IT project

In conclusion, the expansion of NMS to support the Aquatic Nuisance Control permitting functions required by the Inland Lakes and Remedial Action Unit is a logical and cost effective option from a technical evaluation perspective. The overall advantages of using the NMS to support Aquatic Nuisance Control Permitting are summarized as follows:

1. Efficient Structural Database Storage of Aquatic Nuisance Control Permitting Information in the existing NMS database
2. The ability to issue Aquatic Nuisance Control Permit via existing NMS permitting functionalities with enhancements.
3. The ability to perform compliance evaluations with existing NMS functionalities.
4. The capability to store treatment reports with enhancements and to provide a foundation for future expansion to electronic report submissions.
5. Provide a proven application that is capable of future expansion to electronic application submissions in the Electronic Environmental Reporting System (E2).
6. Provide centralized document management for Aquatic Nuisance Control Permit
7. Provide additional existing NMS functionalizes (i.e. My Task, Query, etc.) to Aquatic Nuisance Control permitting.
8. Streamline the compliance data review process by having the treatment report available through statewide NMS System.
9. Save the Department's application development costs by re-utilizing existing resources (NMS).
10. Save the Department's staff training costs by using one application to track GW, NPDES, and Aquatic Nuisance Control Permit within the Department.
11. Improve the overall effectiveness of the State's Aquatic Nuisance Control permitting program with faster responses for permit review, data analyses, compliance assessment, enforcement support, and other water quality management decision-making.

### **Summary of Required Work to Enhance NMS for Aquatic Nuisance Control Permitting**

Information management needs from the Water Bureau's Inland Lakes and Remedial Action Unit will be addressed in a systematic and comprehensive manner. Specifically, major enhancement requirements for the expansion of NMS to support Aquatic Nuisance Control Permitting are identified as follows:

- 1.) Complete the NMS database enhancements to include additional data elements tracked in the Aquatic Nuisance Control permits

- 2.) Complete the enhancements/modifications to the existing NMS modules to support Aquatic Nuisance Control permitting
  - Permitting Wizard
  - Permit Module
  - Permit Limits Module (Treatment Limits)
  - Facility Module (Water body Information)
  - Supplication Module (Submitted Application Status Tracking)
- 3.) Provide technical assistance for data migration of Aquatic Nuisance Control permitting data into the NMS database
- 4.) Provide a complete Aquatic Nuisance Control Permitting Administration Guide
- 5.) Provide at least 4 site-visits of 2 days each to facilitate project implementation tasks such as:
  - Functional Document Development
  - System Prototype Demonstration
  - Review of Aquatic Nuisance Control Program Staff's comments
  - Aquatic Nuisance Control Permitting Function Acceptance Review

Although a detailed work scope cannot be completely identified before a system requirement document is fully developed, we feel that certain "Major Categories" of functional enhancements should be considered for the purpose of an initial cost estimate. These categories are identified and listed as follows:

**1) Permitting Wizard:**

- Add forms to capture the information contained within the following permits
  - Permit for Chemical Treatment to Control Nuisance Aquatic Plant and/or Algae Growth
  - Expedited Permit to Control Nuisance Aquatic Plant Algae
  - Permit for Chemical Treatment to Control Swimmers' Itch or other Nuisance Aquatic Animals
- Need to add Aquatic Nuisance Control discharge permitting logic specific to each permitting option defined below:
  - Ability to link expedited forms to long forms
  - Ability to make Amendments to Permits and track them[This includes association of specific reference tasks to the Permit selected, auto default the permitting task due date based on the type of permit (General or COC), and verification of existing data on the database.]

**2) Permit Module:**

- Need to add Aquatic Nuisance Control permit number generation logic
- Associate and Track Permit Conditions (i.e. a survey must be done first and reported to the DEQ)

**3) Permit Limits Module:**

- Populate the treatment chemicals and pertinent chemical information as parameters in the parameter reference table
- Default the units associated with each chemical when one is selected as a parameter for a permit limit
- Add tracking of acreage associated with the chemical limit treatments pertaining to Adjuvant, Algae, Emergent, Submergent, Swimmers' Itch, Eurasian watermilfoil, etc.

**4) Facility Module (New Waterbody Module):**

- Facility Maintenance Screen needs to be modified to track
  - Waterbody location information (change tag names) and other waterbody information:
    - Lake area in acres
    - Secondary name
    - Single Owner indicator
    - MNFI
    - Fisheries
    - Other Agency
    - DWRPD
    - Wellhead Protection Area
    - Lake Board indicator
    - Easement indicator
    - Mitigation Bank indicator
    - Township indicator
    - Private Wells indicator
    - Outlet indicator
    - Control Structure indicator
    - Flow Data
    - Isolation Distance
    - Wetlands
    - Trout Stream indicator
    - Public Access indicator
    - Special Requirements
    - Topographic Map number
    - Quadrant Name
    - Reference number

- Reduced review indicator
  - Permit by Rule indicator
  
  - Waterbodies that fall in multiple counties and towns, range, sections
  - Automatically Email denoted fisheries, biologists, townships, and the Michigan Natural Features Inventory based on applications submitted and permits issued for specific Waterbodies
  - Update NMS Location “Map It” link to bring up a DEQ specified Map Image Viewer based on the specific waterbody selected
  - Comments, Old Notes, MNFI Review Comments, History (all comments boxes in the current Aquabase application)
- 5) **Supplication Module (Submitted Application Status Tracking):**
- Enhance NMS Supplication Module to track the time taken to process applications:
    - Add the ability to track MDEQ holidays and not count them as time taken to process an application
- 6) **Compliance Module:**
- Use existing NMS Compliance Evaluation Module “as is” without modification
- 7) **Data Migration:**
- Migrate existing Aquatic Nuisance Control Permit Information into NMS database:
    - Waterbody Information
    - Existing Aquatic Nuisance Control Permits
    - Violation and Enforcement Information (if migrated data that can be display in NMS without enhancements to the Compliance Evaluation Module and funding permitted<sup>4</sup>)
- 8) **Documentation:**
- Develop system administration documentation

Above tasks identified represent a “preliminary” set of functionalities required to support Aquatic Nuisance Control Permitting identified during the 10/11/2004 meeting. These tasks should only be used for the purpose of initial project planning and cost estimates.

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<sup>4</sup> A \$ 24,000 budget was reserved to address data migration needs. Actual charges for data migration will be based on the complexity and work scope.

**Skill Set/Experience Required to Develop the NMS Expansion:**

Skills and experience required to develop the NMS expansion to support the Aquatic Nuisance Control Permitting include:

- For business requirements:
  - Regulatory knowledge of the State of Michigan’s Aquatic Nuisance Control permitting, monitoring, inspection, compliance, and enforcement requirements (this could be provided by the DEQ during the course of the project)
  - Detailed working knowledge of the NMS system to support business operation and data flows
  
- For system development and integration:
  - Design, development, and implementation knowledge of the NMS system
  - Technology expertise/knowledge of .NET platforms in Client-Server Application,
  - Technology expertise/knowledge of Microsoft C# programming language,
  - Security implementation experience on a wide spectrum of security options,
  - Relational database design and SQL Server 2000 implementations.
  - System integration
  
- For implementation:
  - Training manuals and workshop

**Development Timeline**

We estimate that the expansion of the NPDES Management System version 2.0 (NMS) to support Aquatic Nuisance Control Permitting implementation will take about 6-7 months to complete. Assuming the project starts on 2/1/2005, the draft project schedule follows:

Project Component	Start Date	Completion Date
1. NMS modifications and integration	2/1/2005	6/30/2005
2. Installation, training, and go-live	7/1/2004	8/31/2005

A detailed project work break down structure will be developed after a functional requirement specification document is developed with MDEQ and MDIT.

**Cost Estimate**

Cost estimate for the expansion of the NMS application to support Aquatic Nuisance Control Permitting is provided as follows:

Task Description	Expense	Contracting Service
		Cost
<b>(A) Project Management/ On-Site Meetings</b>		
(1) Project Management/ Project Report		\$7,200
(2) Project Plan Development		\$1,200
(3) WebEx Cost for Project Discussion	\$2,000	
(4) Face to Face Project Meetings (4 trips; 2-days/trip)	\$4,800	\$9,600
(5) Other Direct Costs		\$1,800
Subtotal:	\$6,800	\$19,800
<b>Cost for Task (A):</b>		<b>\$26,600</b>
<b>(B) Aquatic Nuisance Control Permitting Design Specification - Functional Requirements, Screen Design, Database Modification</b>		
(1) Develop a Detailed Functional Requirement Specification Document (Database, Screen, and Report Design)		<b>\$9,600</b>
(2) Design and Implement NMS Database Changes for Inland Lakes and Remedial Action Unit		\$6,000
(3) Other Direct Costs		\$1,560
Subtotal:		\$17,160
<b>Cost for Task (B):</b>		<b>\$17,160</b>

<b>(C) Aquatic Nuisance Control Permitting Development</b>		
<b>(C.1) ENHANCEMENTS/MODIFICATIONS TO NMS' PERMITTING WIZARD</b>		
(1) Add Permitting Data Entry Forms to Existing Permit Wizard that Capture the Three Aquatic Nuisance Control Permits		\$14,400
(2) Addition of: <ul style="list-style-type: none"> <li>• Aquatic Nuisance Control Permitting Logic of linking Expedited forms to Long forms</li> <li>• Aquatic Nuisance Control "Amendment" Logic</li> </ul>		\$12,000
<b>(C.2) ENHANCEMENTS/MODIFICATIONS TO NMS' PERMIT MODULE</b>		
(3) Populate Aquatic Nuisance Control Treatment Chemicals and Pertinent Information in Parameter Reference Table		\$3,600
(4) Associate and Track Permit Conditions (i.e. a survey must be done first before permit takes effect)		\$3,600
(5) Add permit number generation logic for Aquatic Nuisance Control Permits		\$7,200
(6) Modify and update existing user interface logic to support Aquatic Nuisance Control Permits		\$7,200
<b>(C.3) ENHANCEMENTS/MODIFICATIONS TO NMS' PERMIT LIMITS MODULE (TREATMENT INFORMATION)</b>		
(7) Populate Aquatic Nuisance Control Treatment Chemicals and Pertinent Information in Parameter Reference Table		\$2,400
(8) Default the Correct Unit Associated with Each Chemical When Selected as a Parameter		\$4,800
(9) Add Tracking of Adjuvant, Algae, Emergent,		\$4,800

Task Description	Contracting Service	
	Expense	Cost
Submergent, Swimmers' Itch Acres Associated with the Overall Permit Limits		
<b>(C.4) ENHANCEMENTS/MODIFICATIONS TO NMS' FACILITY MODULE (WATERBODY INFORMATION)</b>		
(10) Add New Data Entry Fields to Track the 25 New Waterbody Data Elements		\$14,400
(11) Add Ability to Track Waterbodies that Fall in Multiple Counties and/or Town, Range, Sections		\$7,200
(12) Automatically Email Denoted Fisheries, Biologists, Townships, and the Michigan Natural Features Inventory Based on Applications Submitted and Permits Issued for Specific Waterbodies		\$14,400
(13) Modify and update the existing NMS facility module to handle Waterbody entity logics		\$7,200
(14) Update NMS "Map It" link to bring up a DEQ specified Map Image Viewer		\$1,200
(15) Add Comments Boxes to Track Comments, Old Notes, MNFI Review Comments, and History		\$4,800
<b>(C.5) ENHANCEMENTS/MODIFICATIONS TO NMS' SUPPLICATION MODULE (SUBMITTED APPLICATION STATUS TRACKING)</b>		
(16) Add the Ability to Ignore MDEQ Holidays when Calculating the Processing Time of an Application		\$2,400
<b>(C.6) MODIFICATIONS TO NMS' LABEL AND SCREEN TEXT BASED ON INLAND LAKES AND STREAMS STAFF LOGIN</b>		
(17) Update the labels and screen text in NMS application screens accordingly based on the Inland Lakes and Streams Staff Login.		\$8,400
Subtotal:		\$120,000
<b>Cost for Task (C):</b>		<b>\$120,000</b>
<b>(D) Data Migration</b>		
(1) Conduct the Data Migration of Existing Waterbody Information, and Permit data into NMS Database		\$24,000
(2) Other Direct Costs		\$2,400
Subtotal:		\$26,400
<b>Cost for Task (D):</b>		<b>\$26,400</b>
<b>(E) Installation/Testing/Documentation</b>		
(1) System Testing		\$24,000
(2) System Installation (1 day trip)	\$1200	\$4,800
(3) Provide a Completed Aquatic Nuisance Control Permitting Administration Guide		\$8,400
(4) Other Direct Costs		\$3,720
Subtotal:	\$1200	\$40,920
<b>Cost for Task (E):</b>		<b>\$42,120</b>
<b>Grand Total (A+B+C+D+E):</b>	<b>\$232,280</b>	

**Basis of Cost Estimate:**

This estimate is prepared based on the following assumptions/conditions:

1. Infrastructure related hardware (servers) and software costs are not included.
2. There will be no enhancement/modification required for the following module:

- Inspection
- Violation
- Enforcement
- Compliance Schedule

**Component 5 - Online Renewal of Certificate of Coverage: Renewal of Non-Storm Water Certificate of Coverage Permit Online**

**Work Description**

The Water Quality Division of the Michigan Department of Environmental Quality (MDEQ) is interested in providing an online web-based permit renewal feature that will allow the facilities to submit/renew their Non-storm Water NPDES Permit Applications online. Specifically, the regulated facility holding the Non-storm Water Certificate of Coverage (COC) Permit issued under one of the General Permits listed below will be able to renew their permits online.

- Concentrated Animal Feeding Operation
- Hydrostatic Pressure Test Water
- Land Application of Biosolids
- Municipal Potable Water Supply Wastewater
- MS4 Jurisdiction
- MS4 Watershed
- New Large CAFO
- Non-contact Cooling Water
- Public Swimming Pool Wastewater
- Petroleum Products Cleanup Wastewater
- Sand and Gravel Mining Wastewater
- Secondary Treatment Wastewater
- Wastewater Stabilization Lagoon

Currently, there are about 1,190 non-storm water COC permits issued and in effect under the General Permits listed above.

To effectively utilize Department resources and to significantly save Department the development costs, the implementation of the online web-based Non-storm Water NPDES permit renewal feature is recommended to use the existing Electronic Environmental Reporting System (E2), to the maximum extent possible. Adding this on-line permit renewal process in E2 will take advantage of features that already provided by E2 and save development costs substantially. Those features include:

1. User Login and Validation Process
2. XML Schema Development
3. Viewing/Printing of the Permit Application
4. Attachment function
5. Online Payment Function (if required)
6. Application Submission and Validation Function
7. Application Status updates notification via email
8. Web Service Core Engine for the retrieval and update of data from State Sub-System
9. System Configuration via Admin Module
10. Task Services Management via Admin Module
11. User Management via Admin Module
12. Database Development for the E2 Server

It is envisioned that with the expanded Non-storm Water NPDES permit renewal feature, the following users will have the listed services available:

**1.) Regulated Facilities:**

- Review and Update Permit Renewal Application form (Long or Short form) online with existing data pre-populated from the NMS database. The “Long form” is reference to the EQP 4659 application form. The “Short form” is a simple one-page form with basic facility and permit information with an applicable certification statement
- Pay renewal application fees online (if required)
- Securely submit Non-storm Water NPDES permit renewal application online
- Print application submission receipt
- Receive acknowledgement of online application submissions via email
- Track application status online
- Receive application processing status updates via email
- Retrieve, view, and print submitted applications

**2.) Michigan NPDES Program Staff:**

- Flag which Non-storm Water NPDES permit is ready for online renewal
- Flag which Permit Renewal Application form (Long or Short form) is to be used by the selected Non-storm Water NPDES permit
- Have the Non-storm Water NPDES permits marked for renewal/available for renewal in E2
- Receive the assigned task when the Non-storm Water NPDES permit renewal application is data exchanged from E2 to NMS
- Have the permitting decision entered in NMS is to E2

Completion of the Non-storm Water NPDES COC permit renewal feature will provide the following benefits to MDEQ:

- Save MDEQ resources used to manually track each application
- Provide the facility with a fast, easy, and efficient way of renewing Non-storm Water NPDES COC Permits. An valued- added service from the State of Michigan to the regulated community
- Reduce the facility compliance costs by offering a streamlined permitting method via readily available computer tools, reduce wait time, and eliminate associate tracking/handling costs
- Provide fast and easy payment validation via integration with existing Michigan electronic payment system
- Improve accuracy of application data by eliminating the potential errors that otherwise would be introduced through manual re-keying data entry
- Improve the overall effectiveness of the NPDES permit management program with faster responses for application processing, data analyses, compliance assessment, enforcement support, permit review and re-issuance, and other water quality management decision-making tools.

**Deliverables**

enfoTech proposes to deliver the following products and services to the MDEQ for the development and implementation of the Non-Storm Water Certificate of Coverage Permit Online Renewal.

**(I) Project Management**

1.A Project Plan Document

**(II) NMS Enhancements & Water\_02 Database Modification**

2.A one-day MDEQ staff review session to review and verify the proposed System Functionalities and to discuss the design enhancements in NMS

3. Modify the Water\_02 database to support the new functionalities (including the data dictionary updates)
4. Add a new functionality that allows the user to mark the Non-Storm Water Certificate of Coverage Permit "Ready for Online Renewal" in the NMS application
5. Add a new functionality that allows the user to set Long or Short form requirements for the online renewal of Non-Storm Water Certificate of Coverage Permit in the NMS application

**(III) Permit Renewal Web Page Development & Implementation in E2**

6. Two two-day MDEQ staff review sessions to review and verify the proposed System Functionalities and to discuss/review the draft Web Pages
7. Update the existing NOI Permit Renewal Page for the use by Non-Storm Water Certificate of Coverage Permit
8. Add the necessary web pages to support the required "Short form" for permit renewal
9. Add/update the existing NPDES EQP 4659 web pages to support the required Long form" for permit renewal
10. Add/update the online printing of the application for both the Long and Short Forms.
11. Add/update the web pages to include the necessary renewal logic

**(IV) Data Exchange Task Services Development & Implementation in E2**

12. Design & Development of Four Task Services with the required Data Composer/Stored Procedures to import, retrieve, and update the required tables in E2 and NMS database. Specifically, the following four Task Services will be developed:
  - a. Import the existing permit information from multiple Water\_02 tables and populate them onto the XML instance file stored in E2 database
  - b. Populate the updated permit application information received in E2 to multiple Water\_02 tables in NMS database
  - c. Populate the online attachments received with the permit renewal application in E2 to the Water\_02 tables in the NMS database
  - d. Synchronize/populate the permit application status from the NMS database to the tables on the E2 Database on the Web Server

**Development Timeline**

We estimate that the development for the “Renewal of Non-storm Water Certificate of Coverage (COC) Permit Online” can be completed within 3 months. A detailed project plan will be developed during the project kickoff. A preliminary timeline for major deliverables is listed below:

PROJECT DELIVERABLES	Completion Dates
1. Provide Renewal of Non-Storm Water Certificate of Coverage (COC) Permit Online via E2	2 to 3 months from project kick-off

**Cost Estimate**

Cost estimate for the “Online Renewal of Non-Storm Water COC Permit” is provided below:

Task Description	Expense	Contracting Service	
		Hour	Cost
<b>(A) Project Management</b>			
(1) Project Management/ Project Report		40	\$6,000
(2) Project Plan Development		8	\$1,200
(3) WebEx Cost for Project Discussion	\$2,000		
(4) Other Direct Costs			\$720
Subtotal:	\$2,000	48	\$7,920
<b>Cost for Task (A):</b>			<b>\$9,920</b>
<b>(B) NMS Enhancements &amp; Water_02 Database Modification</b>			
(1) One 1-days Onsite Visit for Functional Requirements Gathering	\$1,200	8	\$1,200
(2) Modify Water_02 database to Support the New Functionalities (including data dictionary updates)		8	\$1,200
(3) Add a New Functionality that Allows the User to Mark the Non-Storm Water Certificate of Coverage Permit “Ready for Online Renewal” in the NMS Application		16	\$2,400
(4) Add a New Functionality that Allows the User to Set Long and/or Short Form Requirements for the Online Renewal of Non-Storm Water Certificate of Coverage Permits in the NMS Application		16	\$2,400
(5) Other Direct Costs			\$720
Subtotal:	\$1,200	48	\$7,920
<b>Cost for Task (B):</b>			<b>\$9,120</b>
<b>(C) Permit Renewal Web Page Development &amp; Implementation in E2</b>			
<b>(C.1) REQUIREMENT ANALYSIS/DEFINITION AND SYSTEM DESIGN</b>			
(1) Two 1-day Onsite Visits for Functional Requirements Gathering	\$2,400	24	\$3,600
(2) Develop an Alpha Specification		16	\$2,400
(3) Develop a Beta Specification		24	\$3,600
(4) Develop a Final Specification for Data Exchange and Overall system Design		24	\$3,600
<b>(C.2) SYSTEM DEVELOPMENT, REVIEW, TESTING, AND APPROVAL</b>			
<b>Beta I (Business Process Flow)</b>			
(5) Develop Beta I System Based on the Alpha Spec. (Modify E2 to accommodate both “Long and Short Form”)		40	\$6,000
(6) Update the existing NOI Permit Renewal Page for the use by Non-Storm Water Certificate of Coverage Permit		16	\$2,400
(7) Review Beta I System with Program Staff (Prepare	\$1,200	16	\$2,400

Task Description	Expense	Contracting Service	
		Hour	Cost
meeting materials for the one day onsite meeting)			
<b>Beta II (Facility-to-E2 Data Flow)</b>			
(8) Enhance the Permit XML Schema for the Application and a Data Mapping Document Between the Schema and the Application Forms		16	\$2,400
(9) Develop Beta II System Based on the Beta Spec. (Modify E2 to accommodate Facility-to-State permit flow capability)		16	\$2,400
(10) Review Beta II System with Program Staff (Prepare meeting material, one day onsite meeting)	\$1,200	8	\$1,200
(11) Finalize Beta II (Data capturing capability) based on the Program Staff comments - hosted at enfoTech		16	\$2,400
<b>Beta III (E2-to-NMS Database Data Flow)</b>			
(12) Design & Development of Task Services and the required Stored procedures/Data Composer to Import the existing permit information from multiple Water_02 tables and populate them onto the XML instance file stored in E2 database		80	\$12,000
(13) Design & Development of Task Services and the required Stored procedures/Data Composer to Populate the updated permit application information received in E2 to multiple Water_02 tables in NMS database		60	\$9,000
(14) Design & Development of Task Services and the required Stored procedures/Data Composer to Populate the online attachments received with permit renewal application in E2 to the Water_02 tables in NMS database		40	\$6,000
(15) Design & Development of Task Services and the required Stored procedures/Data Composer to Synchronize/populate the permit application status from the NMS database to the tables on the E2 Database on the Web Server		24	\$3,600
(16) Review Beta III System with Program Staff (Prepare meeting materials for one day onsite meetings)	\$1,200	16	\$2,400
(17) Finalize Beta III (Data capturing capability) Based on the Site Visit Comments – hosted in Michigan		16	\$2,400
<b>(C.3) ACCEPTANCE TESTING</b>			
(18) Conduct Overall Integration Test for the Renewal I Function Between NMS and E2		40	\$6,000
(19) Deliver a Draft E2 System Test Script Documentation to Michigan for Acceptance Testing		16	\$2,400
(20) Deliver a Draft E2 System Documentation to Program Staff and DIT		16	\$2,400
<b>(C.4) IMPLEMENTATION ROLL-OUT</b>			
(21) On-site Support for System Configuration and Production Release	\$1,200	8	\$1,200
(22) Deliver a Final E2 System to the DIT Server for Production		16	\$2,400
(23) Other Direct Costs			\$8,220
Subtotal:	\$7,200	548	\$90,420
<b>Cost for Task (C):</b>			<b>\$97,620</b>
<b>Grand Total (A+B+C):</b>	<b>\$116,660</b>		

## **Basis of Cost Estimate**

This estimate is prepared with the following assumptions/conditions:

1. Infrastructure related hardware (servers) and software costs are not included.
2. The development of the online capability for the renewal of the non-storm water COC permit is to be integrated with the existing E2 system
3. The “Long Form” required for the renewal of a Non-storm Water Certificate of Coverage (COC) permit is the same as the NPDES Application Form, EQP 4659
4. The “Short Form” required for the renewal of a Non-storm Water Certificate of Coverage (COC) permit will contain no more than 30 data elements. If more than 30 data elements are needed, the development cost for the “Short Form” Web Page will need to be adjusted accordingly.

**Component 6: E2 Expansion for the WaterChem Sample Data Update**

**Work Description**

The Michigan DEQ is in the process of implementing the E2 product (an enfoTech "off-the-shelf" product) to electronically accept drinking water data from laboratories / water systems. The department wishes to expand the functionality of the e-DWR module to provide the program area staff the ability to search for samples contained in the WaterChem database and view and/or update the sample information. Since the E2 product provides single sign-on and application security, it is desirable to leverage the existing project work for this new functionality.

A general business process is described below and is presented in such a way that it envisions MDEQ staff as the initial users of this functionality, but the functionality may become available to additional users in the future. The following overview provides a general representation of how the WaterChem sample viewing/updating will function.

- 1) The MDEQ uses the WaterChem database to store all sample/result information for the drinking water program. Data is entered into WaterChem through data transfer with the state laboratory's LIMS systems and e-DWR. After the data is in WaterChem, it is then transferred to the SDWIS/State system (for community water systems) or WaterTrak (for non-community water systems).
- 2) MDEQ staff will log-in to the e-DWR system and be provided a menu item in the left hand frame to search for samples in WaterChem. Access to this feature will be controlled by the eDWR Application security configuration. The user will be able to search based on the following criteria:
  - A. Analyte Code/Group
  - B. Collection Date
  - C. System Type (e.g. Untreated Public Distribution)
  - D. County
  - E. Owner
  - F. Sample ID
  - G. Site Code
  - H. District
  - I. Source (e.g. Type 1, Type 2)
  - J. WSSN
  - K. Result
  - L. Combination of above (e.g. WSSN, Source, and System Type)
  - M. Incorrect / blank site code
- 3) After the user enters the search criteria and clicks the search button the records meeting the search criteria will be returned in a table. The table will have the following columns:
  - A. Check box to select sample for download
  - B. View button
  - C. Edit button
  - D. Sample Number
  - E. Sample Collection Date
  - F. WSSN
  - G. Owner
  - H. Site Code
  - I. Sample Location
  - J. Sample Purpose
- 4) The user can click the view button to view the sample information and results contained in the WaterChem database. The user should be able to print out the information in the form of a report.
- 5) The user can click the Edit button to open the sample for editing. Access to this feature will be controlled by the eDWR Application security configuration. Not all fields will be editable. A list of the fields that will be editable will be determined during the design meetings. If the Site Code is blank

or is invalid, a drop down with the correct values will be provided to the user. After the user is finished updating the information, he or she will click an update button. The information will then be updated in the WaterChem database. The date/time of the update as well as the user who made the change will be stored in WaterChem. The archiving of data is currently handled by a trigger on the WaterChem tables.

- 6) In order to download the sample/result information, the user will first select one or many samples by clicking the check box next to the sample(s) of interest. The user will then click either the "Download CSV" or "Download XML" button. When this button is clicked the eDWR system will generate the file for download to the user's local machine. The eDWR system will not provide functionality for the user to edit the downloaded files locally and upload back the changes through eDWR.

The MDEQ would like to provide an interface for state staff to view and/or update the sample data contained in the WaterChem database. In addition, the state staff will be able to export a group of samples into a Comma Delimited file (CSV) or an XML Instance document. This interface will be plugged into the eDWR system to provide a single interface for the state to manage its drinking water data.

### Scope of Work and Project Tasks

enfoTech proposes to expand the capabilities of the "off-the-shelf" E2 product and provide associated technical services to accomplish this objective because there are significant benefits to utilizing the existing E2 project results to achieve the additional requirements and realize a cost savings. E2 is a web-enabled application for the submission and management of electronic reports. E2 provides the regulated community with an alternate way of submitting required reporting data and managing their submitted reports under the specified regulating programs - it is XML schema and Web-services based, and meets federal security requirements (e.g., CROMERR). Moreover, E2 enables the States to electronically validate the data, acknowledge receipt, and upload data to the State's central database.

enfoTech proposes to deliver the following products and services to the MDEQ to achieve complete system integration and save project costs. Listed below are the products and services to be provided for the WaterChem Sample Viewing/Updating through eDWR development and implementation.

#### Project Tasks:

1. **Requirements gathering for Expanding E2 functionality**
  - o enfoTech will conduct a site visit with the MDEQ to review the requirements for the expansion of the eDWR module.
2. **Develop a System Design Document (SDD) for Expanding E2 Functionality to Support WaterChem sample viewing/updating**
  - o **Design/Develop screens for searching:** enfoTech will work with the MDEQ to review the searching capabilities and design screens for the user. This will include the fields to be displayed in the search results table.
  - o **Design/Develop sample/result printable view:** enfoTech will work with the MDEQ to determine the formatting, layout, and fields to be displayed when the user clicks the view button.
  - o **Design/Develop sample update process:** enfoTech will work with the MDEQ to identify the fields which can be updated and the process for updating the WaterChem tables. This will include the user interface as well as the data exchange aspects of updating WaterChem.
3. **Expansion of E2: WaterChem Sample search with view/update capabilities**

- enfoTech will develop the additional search with view/update functionality according to the specifications in the SDD. The additional module will be able to be added to the production eDWR system without affecting the existing functionality/configuration.
- 4. Expansion of E2: Export Search results to Comma Delimited file or XML file**
  - enfoTech will develop the functionality to download the WaterChem data into a CSV or XML file according to the specifications in the SDD.
- 5. System Testing**
  - enfoTech will work with MDEQ to test the additional eDWR functionality to ensure proper operation and integration with existing eDWR system.
- 6. E2 Server Configuration & Installation:**
  - enfoTech will work with MDEQ to support the installation and configuration of the new system functions
- 7. Documentation for the additional eDWR functionality**
- 8. Project Management**

**Deliverables**

1. A two-day site visit to gather requirements
2. System Design Document which will include the following:
  - a. Design of search screens detailing the different searching capabilities provided to the user.
  - b. Design of the printable sample view output.
  - c. Design of the sample update process
3. Expansion of E2: WaterChem Sample search with view/update capabilities
4. Expansion of E2: Export Search results to Comma Delimited file or XML file
5. System Testing
6. E2 Server Configuration and installation
7. A one day MDEQ training session including training materials for the additional functionality
8. System documentation (Staff Guide & User's Guide)
9. Project Management

**Development Timeline**

We estimate that the project can be completed in 6 weeks from the project startup. Detailed project schedule will be developed upon project kick-off and to incorporate availability of DEQ/DIT resources.

**Project Cost Estimate**

The following table is a summary of cost estimates for each project deliverable proposed for this Project.

<b>Estimated Costs in Implementing WaterChem Sample Viewing/Updating</b>	
Description of Deliverable (Product and Services)	Cost (\$)
1. Requirements Gathering	<b>\$ 3,600<sup>5</sup></b>
2. Develop system design document for additional functionality	<b>\$ 4,350</b>
3. Expansion of E2: WaterChem Sample Search with view/update capabilities	<b>\$ 18,000</b>
4. Expansion of E2: Export Search results to Comma Delimited file or XML file	<b>\$ 4,500</b>
5. System Testing	<b>\$ 5,550<sup>6</sup></b>
6. Server Installation & Configuration	<b>\$ 3,150<sup>7</sup></b>
7. Documentation	<b>\$ 5,550</b>
<b>Total Development and Implementation Costs:</b>	<b>\$ 44,700</b>

The Project cost is based on the scope defined in the section 7.3 and the estimate is provided on a not-to-exceed basis. Project payment will be tied to the deliverables defined in the cost estimate table above.

<sup>5</sup> Cost includes preparation, 1-day onsite meeting, traveling expenses

<sup>6</sup> Cost includes a test case document, enfoTech QA/QC testing

<sup>7</sup> Cost includes QA/QC installation package, preparation of installation package, and support to DIT on the system installation and configuration

Form No. DMB 234 (Rev. 1/96)  
 AUTHORITY: Act 431 of 1984  
 COMPLETION: Required  
 PENALTY: Contract will not be executed unless form is filed

STATE OF MICHIGAN  
 DEPARTMENT OF MANAGEMENT AND BUDGET  
 ACQUISITION SERVICES  
 P.O. BOX 30026, LANSING, MI 48909  
 OR  
 530 W. ALLEGAN, LANSING, MI 48933

November 29, 2004

**CHANGE NOTICE NO. 10**  
**TO**  
**CONTRACT NO. 071B1001740**  
**between**  
**THE STATE OF MICHIGAN**  
**and**

NAME & ADDRESS OF VENDOR		TELEPHONE Tony Jeng <b>(609) 896-9777</b>
<b>Enfotech &amp; Consulting, Inc.</b> <b>11 Princess Road, Unit A</b> <b>Lawrenceville, NJ 08648</b>  <b>tony_jeng@enfotech.com</b>		VENDOR NUMBER/MAIL CODE
		BUYER/CA (517) 241-1646 <b>Greg Faremouth</b>
Contract Compliance Inspector: Patty Bogard <b>Consulting Services for an Electronic Wastewater Discharge Reporting System –          Department of Environmental Quality</b>		
CONTRACT PERIOD: From: <b>August 27, 2001</b> To: <b>September 30, 2009</b>		
TERMS <b>N/A</b>	SHIPMENT <b>N/A</b>	
F.O.B. <b>N/A</b>	SHIPPED FROM <b>N/A</b>	
MINIMUM DELIVERY REQUIREMENTS <b>N/A</b>		

**NATURE OF CHANGE (S):**

Effective immediately this contract is hereby **INCREASED** by \$125,000.00 per the attached work statement and vendor proposal.

All other terms, conditions, specifications and pricing remain unchanged.

**AUTHORITY/REASON:**

Per vendor and agency agreement and DMB/ACQUISITION SERVICES approval.

**INCREASE: \$125,000.00**

**TOTAL REVISED ESTIMATED CONTRACT VALUE: \$4,411,773.00**



**DEPARTMENT OF INFORMATION TECHNOLOGY  
IT SERVICES  
STATEMENT OF WORK**

<b>Project Title:</b> <b>FY05 Annual Maintenance – NMS and E2 Suite of Applications</b>	<b>Period of Coverage:</b> <b>10/1/2004 – 9/30/2005</b>
<b>Requesting Department:</b> <b>DIT/MDEQ - Water Bureau</b>	<b>Date:</b> <b>9/27/2004</b>
<b>Agency Project Manager:</b> <b>Mark Breithart</b>	<b>Phone:</b> <b>517-241-1293</b>
<b>DIT Contract Liaison:</b> <b>Patty Bogard</b>	<b>Phone:</b> <b>517-335-4051</b>

**Brief Description of Services to be provided:**

**BACKGROUND:**

MDEQ's Water Bureau, in cooperation with MDIT, have contracted with enfoTech& Consulting, Inc., to provide software development, installation, and support of a number of environmental information systems. These contracts provide an option for the DEQ to retain enfoTech to provide system maintenance and support services after the systems go into production. This SOW provides a cost estimate for maintaining four DEQ systems, listed below, from 10/1/2004 to 9/30/2005.

**PROJECT OBJECTIVE:**

Annual technical support and maintenance services are needed for MDIT and MDEQ Water Bureau by enfoTech& Consulting, Inc., for effective operation of the systems they developed as described below:

The Michigan Department of Information Technology (MDIT) and Department of Environmental Quality (MDEQ) retain enfoTech & Consulting, Inc., to develop and implement the NPDES Information Management System (NMS version 2.0) for Water Bureau users in order to support the NPDES compliance program mandated by the USEPA. In addition, the MDIT/MDEQ (Licensee) also licenses enfoTech's (Licensor) E2 system to streamline Discharge Monitoring Report (DMR) data collection by electronically collecting DMRs via the Internet and flow the data directly to the NMS System. The NMS and E2 have been expanded to provide additional modules/capabilities. These additional capabilities are further described below.

**SCOPE OF WORK:**

The following table (Table 1) lists systems that are currently used by the DEQ and require maintenance services.

System	Description of Modules
(1) NMS	Phase 1: Facility, Permit, Supplication, Document, DMR entry, and Task . Phase 2: Inspection, Schedule of Compliance, Violation, Enforcement
(2) E2 for e-DMR	Electronic DMR submissions
(3) E2 foe e-DWR	Electronic drinking water testing results reporting
(4) NMS-GW	NMS expansion for ground water compliance data tracking
(5) E2 for e-CMR	Electronic groundwater compliance monitoring data reporting

Table 1: Information Management Systems Covered Under This Annual Service Agreement

This SOW is for an annual technical support and maintenance program established between MDIT /MDEQ Water Bureau and enfoTech for providing professional services to MDIT /MDEQ for effective operation of the above systems used at the MDEQ.

**TASKS:**

Services and support will be provided to the Programs listed in Table 1. Support plans are renewable each year. enfoTech will provide Water Bureau (WB) maintenance, technical support, and general enhancements in connection with the Systems covered under this Agreement. These services include:

**(a) User Support**

- “Senior-level” voice technical support, Monday through Friday, 9:00 AM to 6:00 PM EST, with a guaranteed callback response of less than four hours and unlimited incidents;
- Email support with a guaranteed eight-hour acknowledgement;
- Internet and FTP technical support for technical services, documentation, system upgrades, and new releases;
- Dial-up service via VPN/Terminal service on a high-speed Internet line for technical support on the Systems.

**(b) Site Visit Support**

- Provide on-site technical consultation and user/system support to MDIT/WB on request;
- Actual site visits will be determined based on MDIT/WB needs. Each visit must be pre-approved by the Michigan program manager;
- Potential site visits will be provided to a total of six (6) man-day visits;
- Traveling costs (air tickets, rental car, hotel, meals, etc.) are already included as part of the total service package in the annual support contract at no additional fee to MDIT/WB. No cost reductions will be made if fewer site visits are requested/needed by MDIT/WB.

**(c) General Enhancements and Bug Fixes**

- General Enhancements: are minor improvements to the existing functions;
- Bugs: “Bugs” are system errors that will cause the System to stop functioning or generate incorrect results;
- All general enhancements and bug fixes will be addressed by enfoTech. WD and enfoTech will work together to prioritize all system changes. System changes will be delivered to WD in accordance with the “Standard System Release Schedule” defined below;
- SQL Server 2003 database upgrade support.

**(d) System Release Schedule**

- Standard System Release Schedule:
  - NMS v.2 : Once every two months, or as needed
  - E2 : Once every two months, or as needed
- For mission critical issue(s):
  - Mission critical issues: are (1) system errors that, if not resolved, will cause a total failure of the system, or significantly impair the Water Bureau’s ability to continue using the system, or (2) system errors determined by Water Bureau management (with reasonable judgment) to be critical to meeting program area needs
  - Mission critical items will be acknowledged by enfoTech within 2 hours of receipt. enfoTech will initiate the work immediately and keep MDIT/WB apprised of the progress.
  - Resolutions will be provided to MDIT/WB as soon as technically and feasibly possible by enfoTech.

**DELIVERABLES:**

Deliverables will not be considered complete until the Agency Project Manager has formally accepted them. Deliverables for this project are included in TASKS above.

**SKILL SET/EXPERIENCE REQUIRED:**

Skills and experience required for this annual maintenance work include:

- For business requirements:
  - Regulatory knowledge for the State of Michigan’s stormwater, groundwater reporting drinking water monitoring, inspection, compliance, and enforcement requirements.
  - Design, development, and implementation knowledge of the E2 system
  
- For system development and integration:
  - Technology expertise in .Net related Web applications, Web services, XML, Web services implementation using industry standard protocols, such as UDDI, WSDL, SOAP, XML and HTTP, object-based Graphic User Interface (like C#, ASP.NET, VB.NET, etc.) and middle-tier components (like COM+, MTS, Microsoft .NET Assembly, etc.),
  - Security implementation experience on wide spectrum of security options, including traditional multi-layered security and emerging end-to-end message level security such as XKMS, WS-Security, and Cost analysis, and CROMERR requirements
  - Relational database design, and SQL Server 2000 implementations.
  - Systems integration

**PROJECT CONTROL AND REPORTS:**

A monthly progress report will be submitted to the Agency Project Manager throughout the life of this project. Each monthly progress report must contain the following:

1. **Hours:** Indicate the number of hours expended during the past two weeks, and the cumulative total to date for the project. Also state whether the remaining hours are sufficient to complete the project.
  
2. **Accomplishments:** Indicate what was worked on and what was completed during the current reporting period.
  
3. **Funds:** Indicate the amount of funds expended during the current reporting period, and the cumulative total to date for the project.

**SPECIFIC DEPARTMENT STANDARDS:**

Agency standards, if any, in addition to DIT standards and Federal CROMERR and EDSC data standards.

**PAYMENT SCHEDULE and BUDGET:**

System	Project Cost	Maintenance Fee	Note
1. NMS and E2	\$1,320,500	\$92,435	Same amount as FY04
2. e-DWR	\$346,080	\$15,141	Fee is prorated for 7.5 out of 12 months
3. NMS-GW	\$264,700	\$13,897	Fee is prorated for 9 out of 12 months
4. e-CMR	\$68,880	\$3,616	Fee is prorated for 9 out of 12 months
<b>Total:</b>		<b>\$125,089</b>	

The annual support and maintenance fee for this Agreement is \$125,089.00. The fee is due, in full, by October 1, 2004.

**Service Rate**

This section provides a fee schedule for consulting services for work that is outside of the Annual Support Contract Agreement. All rates presented apply to services rendered during this Annual Support Contract Agreement period. Rates are subject to adjustment for subsequent Annual Technical Support

Contract periods and will be negotiated with MDIT/WB before contract renewal.

**HOURLY RATES**

Charges for services provided will be in accordance with the following schedule:

<u>Classification</u>	<u>Hourly Rate (\$/hour)</u>
Principal Application Consultant	\$ 180
Principal System Consultant	\$ 180
Senior System QA/QC Consultant	\$ 160
Senior Application Consultant	\$ 150
Senior System Consultant	\$ 150
System QA/QC Consultant	\$ 130
Application Consultant	\$ 120
System Consultant	\$ 120
Business Support	\$ 90

**POLICY ON TRAVEL**

Traveling expenses are billed based on actual charges. Time spent on traveling during normal office hours will be charged at 1/4 of the normal hourly rate.

The State of Michigan’s traveling expense guidelines will be followed. They include:

- Hotel at actual cost up to \$65 per night.
- Mileage: \$ 0.305 per mile (does not include taxi or rental). Taxi and rental car at actual cost with receipt.
- Meals: Breakfast- \$7.25, Lunch- \$7.25, Dinner- \$16.50, Midnight meal (work after midnight)- \$ 7.25.

**PROJECT CONTACTS:**

**The designated DEQ Agency Project Managers are:**

Jeffrey Jones  
 Department of Environmental Quality  
 Water Bureau  
 2nd Floor North – Constitution Hall  
 525 West Allegan – P.O.Box 30273  
 Lansing, Michigan 48909  
 Phone Number 517-335-4125  
 Fax Number 517-373-9958  
 Email Address [beaulacm@michigan.gov](mailto:beaulacm@michigan.gov)

Kristen Philip  
 Department of Environmental Quality  
 Water Bureau  
 2nd Floor South – Constitution Hall  
 525 West Allegan – P.O.Box 30273  
 Lansing, Michigan 48909  
 Phone Number 517-241-1238  
 Fax Number 517-241-1328  
 Email Address [beaulacm@michigan.gov](mailto:beaulacm@michigan.gov)

**The designated DIT Agency Project Manager is:**

Mark Breithart  
 Michigan Department of Information Technology  
 Constitution Hall, 6-South  
 525 West Allegan – P.O.Box 30273  
 Lansing, Mi 48933

Phone Number 517-241-1293  
Fax Number 517-241-1328  
[BREITHAM@michigan.gov](mailto:BREITHAM@michigan.gov)

**The DIT Contract Administrator for this project is:**

Patty Bogard  
Michigan Department of Information Technology  
Constitution Hall, 6-South  
525 West Allegan – P.O.Box 30273  
Lansing, Mi 48933  
Phone Number 517-335-4051  
Fax Number 517-241-8379  
[BogardP@michigan.gov](mailto:BogardP@michigan.gov)

**AGENCY RESPONSIBILITIES/ASSUMPTIONS:**

1. MDIT/WB may renew said Agreement, for additional one-year periods, for a fee to be negotiated annually between MDIT/WB and enfoTech.
2. Additional on-site support is available, at the MDIT/WB's request, for an additional charge.
3. The maintenance and support services are contingent upon proper use of the MDIT/WB's hardware and the Licensed Programs and do not cover any portion of the Licensed Programs which have been modified without enfoTech's approval.
4. enfoTech shall not be responsible to MDIT/WB for loss of use of the Licensed Programs or for any other liabilities arising from alterations, modifications, enhancements, additions, adjustments, or other changes which have been made to the Licensed Programs or its operating environment by other than authorized representatives of enfoTech. If, in the opinion of enfoTech, any such alterations, modifications, enhancements, additions, adjustments, or other changes adversely affect enfoTech's ability to render maintenance service to the Licensed Programs, enfoTech reserves the right to discontinue services required under this Agreement upon thirty (30) day's prior written notice to MDIT/WB.
5. Major system upgrades are not covered under this Agreement. The cost for major system upgrades will be negotiated between MDIT/WB and enfoTech at the time the upgrade becomes available.
6. Any service performed by enfoTech outside the scope of this Agreement shall be provided at enfoTech's prevailing rates for time, materials, and terms.

**LOCATION OF WHERE THE WORK IS TO BE PERFORMED:**

Consultants will work at Constitution Hall, Lansing , MI, their East Lansing, MI and Lawrenceville, NJ office locations, whatever is most appropriate.

**APPROVALS**

\_\_\_\_\_  
Agency Project Manager

\_\_\_\_\_  
DIT Information Officer

11 Princess Road, Unit A  
Lawrenceville, NJ 08648



Sales: 609.896-9777  
Support: 609.896.2827  
Fax: 609.896.2555  
[www.enfotech.com](http://www.enfotech.com)

September 23, 2004

Mr. Michael Beaulac  
Michigan Department of Environmental Quality  
Constitution Hall  
525 W. Allegan, 5<sup>th</sup> Floor south  
Lansing, MI 48933

**Subject: FY05 Annual Maintenance Proposal for enfoTech Supported  
Environmental Information Systems**

Dear Mike:

enfoTech provides software development, installation, and support of environmental information systems for the DEQ under certain contracts. These contracts provide an option for the DEQ to retain enfoTech to provide system maintenance and support services after the systems go into production. This proposal provides a cost estimate for maintaining four DEQ systems, listed below, from 10/1/2004 to 9/30/2005.

System	Project Cost	Maintenance Fee	Note
1. NMS and E2	\$1,320,500	\$92,435	Same amount as FY04
2. e-DWR	\$346,080	\$15,141	Fee is prorated for 7.5 out of 12 months
3. NMS-GW	\$264,700	\$13,897	Fee is prorated for 9 out of 12 months
4. e-CMR	\$68,880	\$3,616	Fee is prorated for 9 out of 12 months
<b>Total:</b>		<b>\$125,000</b>	

A copy of the service agreement is included as Attachment A. The proposed maintenance fee is due in full on October 1, 2004.

Thank you for the opportunity to present this cost proposal for your consideration.

Sincerely,

Tony C. Jeng  
Executive Vice President

TCJ:jh  
Attachments  
cc: File - MDEQ

Mr. Mike Beaulac  
 DEQ IT Systems Maintenance Proposal for FY05  
 Page 2 of 4

**ATTACHMENT A: SERVICE AND SUPPORT AGREEMENT**

**(1) Overview**

The Michigan Department of Information Technology (MDIT) and Department of Environmental Quality (DEQ) retain enfoTech & Consulting, Inc. to develop and implement the NPDES Information Management System (NMS version 2.0) for Surface Water Quality Division users in order to support the NPDES compliance program mandated by the USEPA. In addition, the MDIT/WD (Licensee) also licenses enfoTech’s (Licensor) E2 system to streamline Discharge Monitoring Report (DMR) data collection by electronically collecting DMRs via Internet and flow the data directly to the NMS System. The NMS and E2 have been expanded to provide additional modules/capabilities.

The following table (Table 1) lists systems that are currently used by the DEQ and require maintenance services.

System	Description of Modules
(1) NMS	Phase 1: Facility, Permit, Supplication, Document, DMR entry, and Task . Phase 2: Inspection, Schedule of Compliance, Violation, Enforcement
(2) E2 for e-DMR	Electronic DMR submissions
(3) E2 foe e-DWR	Electronic drinking water testing results reporting
(4) NMS-GW	NMS expansion for ground water compliance data tracking
(5) E2 for e-CMR	Electronic groundwater compliance monitoring data reporting

Table 1: Information Management Systems Covered Under This Annual Service Agreement

This Agreement is an annual technical support and maintenance program established between MDIT/WD and enfoTech for providing professional services to MDIT/WD for effective operation of the above systems used at the MDEQ.

**(2) Agreement Period:**

This Agreement will cover services from October 1, 2004 to September 30, 2005.

**(3) Fees and Payment:**

The annual support and maintenance fee for this Agreement is \$125,000.00. The fee is due, in full, by October 1, 2004.

If new modules are added to the existing Systems during the effective period of this Agreement, the support and maintenance support fee for the new modules will be prorated at the prevailing rate (7% of the project cost).

It is recognized by MDEQ and enfoTech that the System might continue to evolve and it is the intention of both parties to keep a similar time cycle for annual support and maintenance agreements in the future.

**(4) Computer Systems Covered Under This Agreement:**

Computer systems covered under this Service Agreement are listed in the Table 1 above.

Mr. Mike Beaulac  
DEQ IT Systems Maintenance Proposal for FY05  
Page 3 of 4

**(5) Service and Support Programs**

Services and support will be provided to the Programs listed in Table 1. Support plans are renewable each year.

enfoTech will provide Water Division (WD) maintenance, technical support, and general enhancements in connection with the Systems covered under this Agreement. These services include:

**(5.a) User Support**

- “Senior-level” voice technical support, Monday through Friday, 9:00 AM to 6:00 PM EST, with a guaranteed callback response of less than four hours and unlimited incidents;
- Email support with a guaranteed eight-hour acknowledgement;
- Internet and FTP technical support for technical services, documentation, system upgrades, and new releases;
- Dial-up service via VPN/Terminal service on a high-speed Internet line for technical support on the Systems.

**(5.b) Site Visit Support**

- Provide on-site technical consultation and user/system support to MDIT/WD on request;
- Actual site visits will be determined based on MDIT/WD needs. Each visit must be pre-approved by the Michigan program manager;
- Potential site visits will be provided to a total of six (6) man-day visits;
- Traveling costs (air tickets, rental car, hotel, meals, etc.) are already included as part of the total service package in the annual support contract at no additional fee to MDIT/WD. No cost reductions will be made if fewer site visits are requested/needed by MDIT/WD.

**(5.c) General Enhancements and Bug Fixes**

- General Enhancements: are minor improvements to the existing functions;
- Bugs: “Bugs” are system errors that will cause the System to stop functioning or generate incorrect results;
- All general enhancements and bug fixes will be addressed by enfoTech. WD and enfoTech will work together to prioritize all system changes. System changes will be delivered to WD in accordance with the “Standard System Release Schedule” defined below;
- SQL Server 2003 database upgrade support.

**(5.d) System Release Schedule**

- Standard System Release Schedule:
  - NMS v.2 : Once every two months, or as needed
  - E2 : Once every two months, or as needed
- For mission critical issue(s):
  - Mission critical issues: are (1) system errors that, if not resolved, will cause a total failure of the system, or significantly impair the WD’s ability to continue using the system, or (2) system errors determined by Water Division management (with reasonable judgment) to be critical to meeting program area needs

Mr. Mike Beaulac  
 DEQ IT Systems Maintenance Proposal for FY05  
 Page 4 of 4

- Mission critical items will be acknowledged by enfoTech within 2 hours of receipt. enfoTech will initiate the work immediately and keep MDIT/WD appraised of the progress.
- Resolutions will be provided to MDIT/WD as soon as technically and feasibly possible by enfoTech.

**(6) Others**

1. MDIT/WD may renew said Agreement, for additional one-year periods, for a fee to be negotiated annually between MDIT/WD and enfoTech.
2. Additional on-site support is available, at the MDIT/WD's request, for an additional charge.
3. The maintenance and support services are contingent upon proper use of the MDIT/WD's hardware and the Licensed Programs and do not cover any portion of the Licensed Programs which have been modified without enfoTech's approval.
4. enfoTech shall not be responsible to MDIT/WD for loss of use of the Licensed Programs or for any other liabilities arising from alterations, modifications, enhancements, additions, adjustments, or other changes which have been made to the Licensed Programs or its operating environment by other than authorized representatives of enfoTech. If, in the opinion of enfoTech, any such alterations, modifications, enhancements, additions, adjustments, or other changes adversely affect enfoTech's ability to render maintenance service to the Licensed Programs, enfoTech reserves the right to discontinue services required under this Agreement upon thirty (30) day's prior written notice to MDIT/WD.
5. Major system upgrades are not covered under this Agreement. The cost for major system upgrades will be negotiated between MDIT/WD and enfoTech at the time the upgrade becomes available.
6. Any service performed by enfoTech outside the scope of this Agreement shall be provided at enfoTech's prevailing rates for time, materials, and terms.

**(7) Service Rate**

This section provides a fee schedule for consulting services for work that is outside of the Annual Support Contract Agreement. All rates presented apply to services rendered during this Annual Support Contract Agreement period. Rates are subject to adjustment for subsequent Annual Technical Support Contract periods and will be negotiated with MDIT/WD before contract renewal.

**HOURLY RATES**

Charges for services provided will be in accordance with the following schedule:

<u>Classification</u>	<u>Hourly Rate (\$/hour)</u>
Principal Application Consultant	\$ 180
Principal System Consultant	\$ 180
Senior System QA/QC Consultant	\$ 160
Senior Application Consultant	\$ 150
Senior System Consultant	\$ 150
System QA/QC Consultant	\$ 130
Application Consultant	\$ 120
System Consultant	\$ 120
Business Support	\$ 90

Form No. DMB 234 (Rev. 1/96)  
 AUTHORITY: Act 431 of 1984  
 COMPLETION: Required  
 PENALTY: Contract will not be executed unless form is filed

STATE OF MICHIGAN  
 DEPARTMENT OF MANAGEMENT AND BUDGET  
 ACQUISITION SERVICES  
 P.O. BOX 30026, LANSING, MI 48909  
 OR  
 530 W. ALLEGAN, LANSING, MI 48933

May 27, 2004

**CHANGE NOTICE NO. 9**  
**TO**  
**CONTRACT NO. 071B1001740**  
**between**  
**THE STATE OF MICHIGAN**  
**and**

NAME & ADDRESS OF VENDOR  <b>Enfotech &amp; Consulting, Inc.</b> <b>11 Princess Road, Unit A</b> <b>Lawrenceville, NJ 08648</b>  <b>tony_jeng@enfotech.com</b>	TELEPHONE Tony Jeng <b>(609) 896-9777</b>
	VENDOR NUMBER/MAIL CODE
	BUYER/CA (517) 241-1646 <b>Greg Faremouth</b>
Contract Compliance Inspector: Patty Bogard <b>Consulting Services for an Electronic Wastewater Discharge Reporting System –                  Department of Environmental Quality</b>	
CONTRACT PERIOD: From: <b>August 27, 2001</b> To: <b>September 30, 2009</b>	
TERMS <p style="text-align: center;"><b>N/A</b></p>	SHIPMENT <p style="text-align: center;"><b>N/A</b></p>
F.O.B. <p style="text-align: center;"><b>N/A</b></p>	SHIPPED FROM <p style="text-align: center;"><b>N/A</b></p>
MINIMUM DELIVERY REQUIREMENTS <p style="text-align: center;"><b>N/A</b></p>	

**NATURE OF CHANGE (S):**

Effective immediately this contract is hereby **EXTENDED** to September 30, 2009.  
 This contract is hereby **INCREASED** by \$1,631,586.00 as of May 10, 2004.

Also, effective immediately the attached statement of work is hereby incorporated into this contract.

All other terms, conditions, specifications and pricing remain unchanged.

**AUTHORITY/REASON:**

Per vendor and agency agreement and DMB/ACQUISITION SERVICES approval.

**INCREASE: \$1,631,586.00**

**TOTAL REVISED ESTIMATED CONTRACT VALUE: \$4,286,773.00**

**Brief Description of Services to be provided:****BACKGROUND:**

The DEQ has contracted with enfoTech to develop various systems (NMS, eDMR, eDWR and e-Permitting) which are information management systems to manage 1.) wastewater permit, monitoring, and compliance information required under the National Pollution Discharge Elimination System (NPDES) and 2.) Public Drinking Water monitoring, and compliance information required under the Safe Drinking Water Act. The e-Permitting application put 3 NPDES permits on the web allowing applicants to apply for these permits anytime from the web..

Executive Order 2003-23, issued on December 8, 2003, mandated to certain Departments that they have a web-enabled portal on-line by September 30, 2004 which will allow the application and tracking of permits. The DEQ has identified 11 key permits which should be incorporated into the portal. One additional permit from DLEG for a plumbing permit has been added for demonstration of technology purposes. Additionally, after evaluating all options, the DEQ has elected to proceed with this project using enfoTech as the preferred vendor and to incorporate the existing work done to date into the new scope of the project.

**PROJECT OBJECTIVE:**

To design, develop, test and implement an on-line web portal which will enable the DEQ to meet the terms of EO 2003-23. The technology selected should be flexible and extensible allowing the addition of additional permits in the future and allowing DIT staff to assume the all programming and maintenance duties in the future.

**SCOPE OF WORK:**

## Phase I permits will include:

- Waste Handler Site Identification
- Industrial Stormwater Notice of Intent
- Industrial Stormwater No Exposure Certification
- Construction Site Stormwater Notice of Coverage
- Consolidated Application for Wetlands/Floodplains/Inland Lakes/Critical Dunes/Dredge & Fill
- NPDES Individual Permits
- Plumbing Permit

## Phase II permits will include:

- Air Permit to Install
- Safe Drinking Water Construction Permit
- Public Waste Water Construction Permit
- Groundwater Discharge Permit

Individual permits are listed on the attached summary sheet.

**TASKS:**

Technical support is required to assist with the following tasks for each permit:

- Business analysis, design, coding, testing, and deployment of the Decision Tree module
- Knowledge transfer to DIT training module
- Business analysis, design, coding, testing, and deployment of the Payment – Accounting module
- Business analysis of the permit requirements - 8 permit
- Technical analysis of the permit data flows - 8 permits
- Work flow description and implementation plan - 8 permits
- Database connection(s) proposal and implementation plan - 8 permits
- Tracking analysis and tracking system implementation plan - 8 permits
- Testing and debugging scripts - all modules
- Deployment and maintenance plan - all modules

**DELIVERABLES:**

Deliverables will not be considered complete until the Agency Project Manager has formally accepted them.

Each individual permit is considered a deliverable package and shall consist of those items listed under TASKS above.

These modules are:

**EXPECTED CONTRACTOR WORK HOURS AND CONDITIONS:**

Work hours on-site are not to exceed eight (8) hours a day, forty (40) hours a week. Normal working hours of 8:00 am to 5:00 pm are to be observed unless otherwise agreed to in writing.

**APPROVALS**

\_\_\_\_\_  
Agency Project Manager

\_\_\_\_\_  
DIT Information Officer

Form No. DMB 234 (Rev. 1/96)  
 AUTHORITY: Act 431 of 1984  
 COMPLETION: Required  
 PENALTY: Contract will not be executed unless form is filed

STATE OF MICHIGAN  
 DEPARTMENT OF MANAGEMENT AND BUDGET  
 ACQUISITION SERVICES  
 P.O. BOX 30026, LANSING, MI 48909  
 OR  
 530 W. ALLEGAN, LANSING, MI 48933

May 20, 2004

**CHANGE NOTICE NO. 8**  
**TO**  
**CONTRACT NO. 071B1001740**  
**between**  
**THE STATE OF MICHIGAN**  
**and**

NAME & ADDRESS OF VENDOR  <b>Enfotech &amp; Consulting, Inc.</b> <b>11 Princess Road, Unit A</b> <b>Lawrenceville, NJ 08648</b>  <b>tony_jeng@enfotech.com</b>	TELEPHONE Tony Jeng <b>(609) 896-9777</b>
	VENDOR NUMBER/MAIL CODE
	BUYER/CA (517) 241-1646 <b>Greg Faremouth</b>
Contract Compliance Inspector: Patty Bogard <b>Consulting Services for an Electronic Wastewater Discharge Reporting System –</b> <b>Department of Environmental Quality</b>	
CONTRACT PERIOD: From: <b>August 27, 2001</b> To: <b>September 30, 2007</b>	
TERMS <p style="text-align: center;"><b>N/A</b></p>	SHIPMENT <p style="text-align: center;"><b>N/A</b></p>
F.O.B. <p style="text-align: center;"><b>N/A</b></p>	SHIPPED FROM <p style="text-align: center;"><b>N/A</b></p>
MINIMUM DELIVERY REQUIREMENTS <p style="text-align: center;"><b>N/A</b></p>	

**NATURE OF CHANGE (S):**

Effective September 30, 2004, this contract is hereby EXTENDED three (3) years to compensate for the selling of the State Software through Enfotech to other entities.

**AUTHORITY/REASON:**

Per vendor and agency agreement.

**TOTAL ESTIMATED CONTRACT VALUE REMAINS: \$2,655,187.00**

Form No. DMB 234 (Rev. 1/96)  
 AUTHORITY: Act 431 of 1984  
 COMPLETION: Required  
 PENALTY: Contract will not be executed unless form is filed

STATE OF MICHIGAN  
 DEPARTMENT OF MANAGEMENT AND BUDGET  
 ACQUISITION SERVICES  
 P.O. BOX 30026, LANSING, MI 48909  
 OR  
 530 W. ALLEGAN, LANSING, MI 48933

April 28, 2004

**CHANGE NOTICE NO. 7**  
**TO**  
**CONTRACT NO. 071B1001740**  
**between**  
**THE STATE OF MICHIGAN**  
**and**

NAME & ADDRESS OF VENDOR		TELEPHONE Tony Jeng <b>(609) 896-9777</b>
<b>Enfotech &amp; Consulting, Inc.</b> <b>11 Princess Road, Unit A</b> <b>Lawrenceville, NJ 08648</b>  <b>tony_jeng@enfotech.com</b>		VENDOR NUMBER/MAIL CODE
		BUYER/CA (517) 241-1647 <b>Irene Pena</b>
Contract Compliance Inspector: Patty Bogard <b>Consulting Services for an Electronic Wastewater Discharge Reporting System –          Department of Environmental Quality</b>		
CONTRACT PERIOD: From: <b>August 27, 2001</b> To: <b>September 30, 2004</b>		
TERMS <b>N/A</b>	SHIPMENT <b>N/A</b>	
F.O.B. <b>N/A</b>	SHIPPED FROM <b>N/A</b>	
MINIMUM DELIVERY REQUIREMENTS <b>N/A</b>		

**NATURE OF CHANGE (S):**

The State has authorized EnfoTech and Consulting Inc. to resell the state owned NPDES Management System software to other municipalities, per enclosed license agreement.

**AUTHORITY/REASON:**

Per vendor and agency agreement.

**TOTAL ESTIMATED CONTRACT VALUE REMAINS: \$2,655,187.00**

## Michigan NMS License Agreement

This license agreement (“Agreement”) is between the State of Michigan (the “State”), acting by and through the State Administrative Board for the Michigan Department of Environmental Quality (“MDEQ”) and the Department of Information Technology (DIT), and EnfoTech & Consulting, Inc. (“Developer”), a New Jersey corporation and software developer, for the licensing of a software system known as the Michigan National Pollution Discharge Elimination System Management System (NMS) to the Developer.

### RECITALS:

Developer wishes to obtain a license to the Software for the purpose of licensing the Software, together with certain modifications to be formulated by Developer, to its customers (“Affiliates”).

Subject to the terms and conditions of the Agreement, the State is willing to grant to Developer a limited license to the Software.

This Agreement shall apply only with respect to Developer’s provision of licensed software products to Affiliates.

THEREFORE, the parties, in consideration of the terms and conditions set forth in this Agreement, the sufficiency of which is acknowledged, agree as follows:

### SECTION 1: DEFINITIONS

1.1. “Agreement” refers specifically to this document and any attachments or exhibits and corresponding license agreements.

1.2. “Affiliate” refers to any entity receiving a license from the Developer.

1.3. Reserved.

1.4. Reserved.

1.5. “Covered Code” means the Original Code and/or any Derivative Works of the Software.

1.6. “Derivative Work” means a work that is based on one or more preexisting works, such as a revision, enhancement, modification, translation, abridgement, condensation, expansion, or any other form in which such preexisting works may be recast, transformed, or adapted, and that if prepared without authorization of the owner of the copyright in such preexisting work, would constitute a copyright infringement. For purposes of this Agreement, a Derivative Work includes any compilation that incorporates such preexisting work.

1.7. “Documentation” refers to all textual material relating to the operation of the Covered Code, including flow charts, operating instructions and related technical information, plus all maintenance modifications which generally relate to the software. Documentation shall also include customary end-user materials, such as user manuals.

1.8. Reserved.

- 1.9 Reserved.
- 1.10. “MDEQ” refers to the Michigan Department of Environmental Quality.
- 1.11. “MDIT” refers to the Michigan Department of Information Technology.
- 1.12. “Original Code” means Source Code of computer software code which is described in the list of Covered Code developed by MDEQ and the Developer as described in **Exhibit B**.
- 1.13. “Software” refers to the computer program system known as the NMS, including Covered Code and Documentation.
- 1.14. Reserved.
- 1.15. “State” means the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees and agents.
- 1.16. “Gross Revenue” means the Software Licensing Fee received by Developer from the sale of the Software to any Affiliate or otherwise obtained as a result of this Agreement before deduction of any expenses, taxes, charge-backs, or reimbursements.

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## SECTION 2: AGREEMENT

### 2.1. License.

The State hereby grants to Developer an exclusive, transferable license to the Software for the purpose of developing and commercializing the Software (or portions thereof) including within such license the rights:

- (a) to use the Software to prepare or create Derivative Works;
- (b) to secure and protect the Software in a manner consistent with maintaining the State's exclusive and proprietary rights to the Software (except any litigation needs to coordinated with the Michigan Department of Attorney General) by taking appropriate action, including instructing Developer's personnel who are permitted access to the Software regarding Developer's obligations under this Agreement; and
- (c) to license the Software (or portions thereof) to Affiliates based on commercially reasonable terms.

### 2.2. Reserved.

### 2.3. Reserved.

## SECTION 3: LICENSE OBLIGATIONS

### 3.1. License.

Developer may license Software to Affiliates subject to the limitations of this Agreement.

### 3.2. Description of Derivative Works.

Developer shall cause all Software to which the Developer contributes to contain a file documenting the changes Developer made to create that Software and the date of any change.

### 3.3. Intellectual Property Matters

#### (a) Third Party Claims.

If Developer has knowledge that a party claims an intellectual property right in particular functionality, code (or its utilization under the License) or Documentation, Developer shall include with Software distributions a text file entitled "LEGAL" which describes the claim and the party making the claim in sufficient detail that a recipient will know whom to contact.

#### (b) Contributor APIs.

If Developer's Derivative Work is an application programming interface (API) and Developer owns or controls patents which are reasonably necessary to implement that API, the Developer must also include this information in the LEGAL file.

### 3.4. Required Notices.

Developer shall duplicate the notice in **Exhibit A** and place it in each file of the Software, and shall reference this Agreement in any documentation for the Covered Code.

3.5. Larger Works.

Developer may create a Derivative Work by combining Covered Code with other code not governed by the terms of this Agreement and license the Derivative Work as a single product. In such case, Developer shall ensure that the provisions of this Agreement applicable to the Covered Code are fully complied with, even though the other code in the Derivative Work is not considered Covered Code.

**SECTION 4: PAYMENTS**

4.1. Royalties

Developer shall pay to the State royalties equal to one hundred percent (100%) of Gross Revenues for each license or other use of the Covered Code. Software Licensing Fees will be at least the minimum amounts for the Covered Code as described in the following table:

Component	Minimum Royalty Fee
System: Facility, Permit, DMR, Supplication, and Task Tracking	
ce and Enforcement Module	
ater Permitting Module	

Developer will pay the above royalties as a minimum, regardless of the pricing of the Software or the Gross Revenues. If the Software is sold for a higher price that would result in royalties greater than the Software Licensing Fee described above, then the amount over the above Software Licensing Fee will be paid fifty percent (50%) to the State and fifty percent (50%) to the Developer in addition to payment of the base Software Licensing Fee.

As the State develops Derivative Works, the State may include these as additional items in the above list for licensing to the Developer under this Agreement. The State shall specify the minimum royalty fee when making additions to the list.

4.2. Reserved.

4.3. Payment and Reporting Schedule.

Royalty payments shall be made within forty-five (45) calendar days following the end of September, December, March, and June for any quarter in which Gross Revenues were received. Developer shall also include statements of said Gross Revenues and royalties due with each payment and provide a statement of the entire year’s Gross Revenues and royalties due with the September quarter statement. Payments should be deducted from the State of Michigan invoices from Developer and itemized in invoices sent to the address listed in this Agreement.

If royalty payments exceed invoiced amounts in any given quarter, then the Developer will issue a check, payable to the State of Michigan, and send it to the address listed in Section 9.

4.4 Auditing

(a) Examination of Records. Developer agrees that the State, including its duly authorized representatives, until the expiration of three (3) years after final payment of all amounts due under this Agreement and all pending matters are closed (collectively, the "Audit Period"), shall have access to and the right to examine and copy any of Developer's books, records, documents and papers pertinent to establishing Developer's compliance with the terms and conditions of this Agreement and with applicable laws and rules, including the State's procurement rules, regulations and procedures, and actual performance of this Agreement for the purpose of conducting an audit, examination, excerpt and/or transcription. This provision also applies to the books, records, accounts, documents and papers, in print or electronic form, of any parent, affiliated or subsidiary organization of Developer, or any Subcontractor of Developer performing services in connection with this Agreement to the extent relevant to this Agreement.

(b) Retention of Records. Developer shall maintain at least until the end of the Audit Period all pertinent financial and accounting records (including time sheets and payroll records, and information pertaining to this Agreement and to the license, software, and commodities provided under this Agreement) pertaining to the Agreement in accordance with generally accepted accounting principles and other procedures specified by the State. Financial and accounting records shall be made available, upon request, to the State at any time during the Audit Period. If an audit, litigation, or other action involving Developer's records is initiated before the end of the Audit Period, the records must be retained until all issues arising out of the audit, litigation, or other action are resolved or until the end of the Audit Period, whichever is later.

#### 4.5 Errors

(a) If the audit demonstrates any errors in the statements provided to the State pursuant to Section 4.3, then the amount in error shall be reflected as a credit or debit on the next invoice and in subsequent invoices until the amount is paid or refunded in full. However, a credit or debit may not be carried for more than four (4) quarterly statements. If a balance remains after four (4) quarterly statements, then the remaining amount will be due as a payment or refund within forty-five (45) days of the last quarterly statement that the balance appeared on.

(b) If the difference between the payment received and the correct payment amount is from zero to five percent (0-5%), then the State shall pay the full cost of the audit. If the difference is between five and ten percent (5-10%), then the reasonable cost of the audit shall be split between the State and the Developer. If the difference is greater than ten (10%), then the Developer shall pay all of the reasonable costs of the audit.

### **SECTION 5: PROPRIETARY RIGHTS**

Developer acknowledges and agrees that title to and ownership of all copies of the Covered Code and Documentation originating from the State or developed through funding provided by the State, including all copyrights, trademarks, patents or other intellectual property rights thereto, whether in machine-readable or printed form, and all rights therein are and shall remain the exclusive property of the State. Provided, Derivative Works performed and paid for by Affiliate will be owned and title retained by the Developer and/or Affiliate responsible for creation unless otherwise specified.

### **SECTION 6: WARRANTY**

The State does not warrant that the functions contained in the Software will meet the requirements of Developer or any Affiliates or that the operation of the Software will be uninterrupted or error free. Developer and any Affiliates acknowledge that the Software is of such complexity that it

may have inherent defects. Developer and any Affiliates bear the entire risk regarding the quality and performance of the Software.

EXCEPT FOR THE EXPRESS WARRANTIES STATED IN THIS AGREEMENT, THE STATE EXPRESSLY DISCLAIMS ALL WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WITH REGARD TO THE COVERED CODE AND ANY RELATED DOCUMENTATION.

The State does not warrant that the Software does not infringe any patents, copyrights or proprietary rights of a third party. If the Software becomes the subject of a claim of infringement of a copyright, patent or other proprietary right, the State may, at its sole discretion (1) obtain the right for the Developer or Affiliates to continue using the Software, (2) replace or modify the Software to make it non-infringing or (3) withdraw the Software from the market with no further liability to the Developer or any Affiliate. The State shall not have any liability whatsoever for any claim of copyright or patent infringement or other proprietary right violations when such claims are based on Developer's or Affiliate's use of a Derivative Work of the Software.

The Developer will include this warranty statement in its license agreements with Affiliates.

## **SECTION 7: LIMITATION OF LIABILITY AND INDEMNIFICATION**

### 7.1. Limitation of Liability.

The State's liability to the Developer for any damages, including any lost profits, lost savings or other direct, indirect, incidental, consequential or special damages arising out of this agreement or the use of or inability to use the Software shall be limited to the royalties paid by that specific Affiliate or Developer to the State, on the sale to the particular Affiliate or Developer attempting to hold the State liable. UNDER NO CIRCUMSTANCES AND UNDER NO LEGAL THEORY, WHETHER TORT (INCLUDING NEGLIGENCE), CONTRACT, OR OTHERWISE, SHALL THE STATE BE LIABLE TO DEVELOPER OR ANY OTHER PERSON OR AFFILIATE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY CHARACTER INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF GOODWILL, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, OR ANY AND ALL OTHER COMMERCIAL DAMAGES OR LOSSES, EVEN IF SUCH PARTY SHALL HAVE BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES.

### 7.2. Indemnification.

#### (a) General Indemnification

To the extent permitted by law, the Developer shall indemnify, defend and hold harmless the State from liability of any kind, including all claims and losses, and all related costs and expenses (including reasonable attorneys' fees and costs of investigation, litigation, settlement, judgments, interest and penalties), accruing or resulting to any person, firm or corporation that may be injured or damaged by the Developer in the performance of this Agreement and that are attributable to the negligence or tortious acts of the Developer or any of its subcontractors, or by anyone else for whose acts any of them may be liable provided that the Developer is notified in writing within thirty (30) days from the time that the State has knowledge of such claims. The Developer shall not be liable to the State for consequential damages arising out of claims brought by third parties except for claims for infringement of any United States patent, copyright, trademark or trade secret.

(b) Reserved.

(c) Employee Benefit Indemnification

In any and all claims against the State of Michigan, its departments, divisions, agencies, sections, commissions, officers, employees and agents, by any employee of the Developer or any of its subcontractors, the indemnification obligation under the Agreement shall not be limited in any way by the amount or type of damages, compensation or benefits payable by or for the Developer or any of its subcontractors under worker's disability compensation acts, disability benefit acts or other employee benefit acts. This indemnification clause is intended to be comprehensive. Any overlap in provisions, or the fact that greater specificity is provided as to some categories of risk, is not intended to limit the scope of indemnification under any other provisions.

(d) Patent/Copyright Infringement Indemnification

To the extent permitted by law, the Developer shall indemnify, defend and hold harmless the State from and against all losses, liabilities, damages (including taxes), and all related costs and expenses (including reasonable attorneys' fees and costs of investigation, litigation, settlement, judgments, interest and penalties) incurred in connection with any action or proceeding threatened or brought against the State to the extent that such action or proceeding is based on a claim that any piece of equipment, software, commodity or service supplied by the Developer or its subcontractors or a Derivative Work, or the operation of such equipment, software, commodity or service or the Derivative Work, or the use or reproduction of any documentation provided with such equipment, software, commodity Derivative Work or service infringes any United States patent, copyright, trademark or trade secret of any person or entity, which is enforceable under the laws of the United States.

In addition, should the equipment, software, commodity, Derivative Work or service supplied by the Developer, or its operation, become or in the State's or Developer's opinion be likely to become the subject of a claim of infringement, the Developer shall at the Developer's sole expense (i) procure for the State the right to continue using the equipment, software, commodity or service or, if such option is not reasonably available to the Developer, (ii) replace or modify to the State's satisfaction the same with equipment, software, commodity or service of equivalent function and performance so that it becomes non-infringing, or, if such option is not reasonably available to Developer, (iii) accept its return by the State with appropriate credits to the State against the Developer's charges and reimburse the State for any losses or costs incurred as a consequence of the State ceasing its use and returning it.

Notwithstanding the foregoing, the Developer shall have no obligation to indemnify or defend the State for, or to pay any costs, damages or attorneys' fees related to, any claim based upon (i) equipment developed based on written specifications of the State; or (ii) use of the equipment in a configuration other than implemented or approved in writing by the Developer, including, but not limited to, any modification of the equipment by the State; or (iii) the combination, operation, or use of the equipment with equipment or software not supplied by the Developer under this Agreement.

7.3 Continuation of Indemnification Obligations

The Developer's duty to indemnify pursuant to this Section continues in full force and effect, notwithstanding the expiration or early cancellation of the Agreement, with respect to any claims based on facts or conditions that occurred prior to expiration or cancellation.

7.4 Indemnification Procedures

The procedures set forth below shall apply to all indemnity obligations under this Agreement.

(a) After receipt by the State of notice of the action or proceeding involving a claim in respect of which it will seek indemnification, the State shall promptly notify Developer of such claim in writing and take or assist Developer in taking, as the case may be, any reasonable action to avoid the imposition of a default judgment against Developer. No failure to so notify Developer shall relieve Developer of its indemnification obligations except to the extent that Developer can demonstrate damages attributable to such failure. Within ten (10) days following receipt of written notice from the State relating to any claim, Developer shall notify the State in writing whether Developer agrees to assume control of the defense and settlement of that claim (a "Notice of Election"). After notifying Developer of a claim and prior to the State receiving Developer's Notice of Election, the State shall be entitled to defend against the claim, at Developer's expense, and Developer will be responsible for any reasonable costs incurred by the State in defending against the claim during such period.

(b) If Developer delivers a Notice of Election relating to any claim: (i) the State shall be entitled to participate in the defense of such claim and to employ counsel at its own expense to assist in the handling of such claim and to monitor and advise the State about the status and progress of the Defense; (ii) Developer shall, at the request of the State, demonstrate to the reasonable satisfaction of the State, Developer's financial ability to carry out its defense and indemnity obligations under this Agreement; (iii) Developer shall periodically advise the State about the status and progress of the defense and shall obtain the prior written approval of the State before entering into any settlement of such claim or ceasing to defend against such claim and (iv) to the extent that any principles of Michigan governmental or public law may be involved or challenged, the State shall have the right, at its own expense, to control the defense of that portion of such claim involving the principles of Michigan governmental or public law. Notwithstanding the foregoing, the State may retain control of the defense and settlement of a claim by written notice to Developer given within ten (10) days after the State's receipt of Developer's information requested by the State pursuant to clause (ii) of this paragraph if the State determines that Developer has failed to demonstrate to the reasonable satisfaction of the State Developer's financial ability to carry out its defense and indemnity obligations under this Section. Any litigation activity on behalf of the State of Michigan, or any of its subdivisions pursuant to this Section, must be coordinated with the Department of Attorney General. In the event the insurer's attorney represents the State pursuant to this Section, the insurer's attorney may be required to be designated as a Special Assistant Attorney General by the Attorney General of the State of Michigan.

(c) If Developer does not deliver a Notice of Election relating to any claim of which it is notified by the State as provided above, the State shall have the right to defend the claim in such manner as it may deem appropriate, at the cost and expense of Developer. If it is determined that the claim was one against which Developer was required to indemnify the State, upon request of the State, Developer shall promptly reimburse the State for all such reasonable costs and expenses.

## **SECTION 8: TERMINATION**

### **8.1. Agreement Duration.**

The right to license the Software to new Affiliates as set forth in this Agreement will end five (5) years from the Effective Date. However, either party may terminate this Agreement upon thirty (30) days written notice.

Any licenses which were granted before termination and were paid for in full, shall survive termination, unless this Agreement expressly states otherwise. For those licenses that survive termination, all of the applicable provisions of this Agreement will continue to apply.

## 8.2. Additional Grounds for Termination.

(a) This Agreement may be terminated by the State without further liability to the State in the event Developer fails to remedy a breach of this Agreement within thirty (30) days after written notice of such breach or by mutual agreement of the parties.

(b) The State may immediately cancel this Agreement without further liability to the State upon a Court Order or by Direction of the Federal Government. In the event of a court order halting or suspending activities under the Agreement or, in the case of a Agreement involving federal funds or otherwise subject to federal oversight, issuance of an order or directive by the federal government halting or suspending activities under the Agreement, the State shall promptly notify the Developer in writing of the entry or receipt of such order and shall direct the Developer to take immediate action in conformity with such order or directive. In the event of a termination or suspension of the Agreement under this sub-paragraph, the Developer shall, unless otherwise directed by the State in writing, immediately take all reasonable steps to terminate its operations and to avoid and/or minimize further expenditures under the Agreement.

(c) The State may immediately cancel the Agreement without further liability to the State if the Developer, an officer of the Developer, or an owner of a 25% or greater share of the Developer is convicted of a criminal offense incident to the application for or performance of a State, public, or private contract or subcontract; or convicted of a criminal offense incident to the application for or performance of a State, public or private contract or subcontract; or convicted of a criminal offense including, but not limited to, any of the following: embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property, attempting to influence a public employee to breach the ethical conduct standards for State employees; convicted under state or federal antitrust statutes; or convicted of any other criminal offense which in the sole discretion of the State, reflects on the Developer's business integrity.

(d) The State may immediately cancel the Agreement without further liability in whole or in part by giving notice of termination to the Developer if any final administrative or judicial decision or adjudication disapproves a previously approved request for purchase of personal services pursuant to Constitution 1963, Article 11, Section 5, and Civil Service Rule 7-1.

(e) In the performance of this Agreement, the Developer agrees not to discriminate against any employee or applicant for employment, with respect to their hire, tenure, terms, conditions or privileges of employment, or any matter directly or indirectly related to employment, because of race, color, religion, national origin, ancestry, age, sex, height, weight, marital status, physical or mental disability unrelated to the individual's ability to perform the duties of the particular job or position. The Developer further agrees that every subcontract entered into for the performance of this Agreement will contain a provision requiring non-discrimination in employment, as herein specified, binding upon each subcontractor. This covenant is required pursuant to the Elliot Larsen Civil Rights Act, 1976 Public Act 453, as amended, MCL 37.2101, *et seq.*, and the Persons with Disabilities Civil Rights Act, 1976 Public Act 220, as amended, MCL 37.1101, *et seq.*, and any breach thereof may be regarded as a material breach of this Agreement.

(f) Pursuant to 1980 Public Act 278, as amended, MCL 423.231, *et seq.*, the State shall not award a contract or subcontract to an employer whose name appears in the current register of employers failing to correct an unfair labor practice compiled pursuant to Section 2 of the Act. The United States Labor Relations Board compiles this information. The Developer, in relation to this Agreement, shall not enter into a contract with a subcontractor, manufacturer, or supplier whose name appears in this register. Pursuant to Section 4 of 1980 Public Act 278, MCL 423.324, the State may void this

Agreement if the name of the Developer as an employer, or the name of the subcontractor, manufacturer, or supplier of the Developer appears in the register.

(g) The State may immediately terminate this Agreement if Developer shall have receivership, insolvency, dissolution, liquidation, or similar proceedings (including without limitation the calling of a meeting of creditors of Developer) instituted against it or a substantial part of its assets, and such proceedings shall not be dismissed within sixty (60) days.

(h) The State may immediately terminate this Agreement in the event of a merger or sale of all or substantially all of the assets of Developer to a third party without the consent of the State. However, Developer shall notify the State in advance of any such pending merger or sale and the State shall have thirty (30) days to consent or refuse to consent. Consent shall not be unreasonably withheld. However, any person or entity who merges with or acquires all or substantially all of the assets of Developer must agree to abide by and comply with all of the terms and conditions of this Agreement. It is mutually agreed that if said successor fails to comply with the terms and/or conditions of this Agreement, the State may consider said successor to be in breach of this Agreement.

(i) The State may, by written notice to the Developer, immediately terminate this Agreement if the State determines that gratuities in the form of entertainment, gifts, or otherwise were offered or given by the Developer to any officer or employee of the State with a view toward securing an agreement or securing favorable treatment with respect to the awarding or amending, or the making of any determinations with respect to the performing of such agreement; provided, that the existence of the facts upon which a duly authorized representative makes such findings shall be an issue that may be reviewed in any competent court.

### 8.3. After Termination.

Immediately upon termination or expiration hereof, all licenses granted to Developer hereunder shall terminate, except as provided in Section 8.1. Developer shall deliver to the State or destroy all copies of the Software in its possession or control. Developer shall certify to the State in writing that no copies of the Software in any form remain in Developer's possession or under its control. Any licenses granted to Affiliates with respect to the Software shall survive any termination of this Agreement, subject to the provisions of this Agreement, which by their nature are intended to survive termination. In such case, (a) the State may (at its sole discretion) automatically and without further action by Developer succeed to and assume the Developer's rights under the license; and (b) Developer will remain liable to Affiliates, and shall indemnify and hold the State harmless from and against all loss, claims and expense in any way resulting from warranties, undertakings or promises given with respect to the Software other than the warranties, undertakings and promises made by the State herein.

## SECTION 9: NOTICE

Any notice required or permitted to be given hereunder shall be deemed given if sent by ordinary mail, facsimile transmission or confirmed e-mail transmission as follows:

If to Developer:

Tony Jeng  
Executive Vice President  
11 Princess Road, Unit A  
Lawrenceville, NJ 09648  
Email: tony\_jeng@enfotech.com

If to the State:

**Greg Faremouth**, Buyer  
Michigan Department of Management and Budget  
Acquisition Services  
530 W. Mason  
Lansing MI 48933  
517 241-1646  
Email; faremouthg@michigan.gov

With copy to:

Michigan Department of Environmental Quality  
Richard Powers  
Water Division  
PO Box 30273  
Lansing, Michigan 40909-7773  
Email: powersra@Michigan.gov

And

**Patty Bogard**, Department Specialist  
Michigan Department of Information Technology  
DIT/CMVR  
Email: [bogard@michigan.gov](mailto:bogard@michigan.gov)  
517 335-4051

The notice shall be deemed effective as of 12:00 noon EST on the third business day following the date of mailing, if transmitted by mail. The notice shall be deemed effective on the first business day following the date of sending, if by facsimile transmission or by electronic mail. Business day is defined as any day other than Saturday, Sunday, legal holiday, or day preceding a legal holiday.

## **SECTION 10: VERSIONS OF THE LICENSE**

### 10.1. New Versions.

The State may publish revised and/or new versions of the Software from time to time. Each version will be given a distinguishing version number.

### 10.2. Effect of New Versions.

Once Covered Code has been published under a particular version of the Software, Developer may continue to use it under the terms of that version. Developer may also choose to use such Covered Code of any subsequent version of the Software published by the State under the terms of this Agreement.

## **SECTION 11: INDEPENDENT CAPACITY OF DEVELOPER**

The relationship between the State and Developer is that of independent contractor. No agent, employee, or servant of Developer or any of its Subcontractors shall be or shall be deemed to be an employee, agent or servant of the State for any reason. Developer will be solely and entirely responsible for its acts and the acts of its agents, employees, servants and Subcontractors during the performance of this Agreement.

## **SECTION 12: ASSIGNABILITY**

This Agreement is not assignable by the Developer either in whole or in part, without the prior written consent of the State. It is the policy of the State of Michigan to withhold consent from proposed assignments, subcontracts, or novations when such transfer of responsibility would operate to decrease the State's likelihood of receiving performance on the Agreement or the State's ability to recover damages. Subject to the foregoing, this Agreement shall bind and inure to the benefit of the parties' heirs, successors, legal representatives, or assigns. The State may assign this Agreement to a successor in interest of MDEQ if responsibility for the programs involved is transferred to another agency of the State of Michigan.

## **SECTION 13: RESERVED**

## **SECTION 14: CONFIDENTIALITY**

### 14.1. Confidentiality

While the existence of this Agreement is not confidential, the actual terms and conditions of this Agreement shall be kept confidential and not be disclosed to any third party without the written consent of the Developer and the State, except where disclosure is required pursuant to court order or by law.

### 14.2. Confidential Information.

Developer and the State each acknowledge that the other possesses and will continue to possess confidential information that has been developed or received by it. As used in this Section, "Confidential Information" of Developer shall mean all non-public proprietary information of Developer (other than Confidential Information of the State as defined below) which is marked confidential, restricted, proprietary or with a similar designation. "Confidential Information" of the State shall mean any information which is retained in confidence by the State (or otherwise required to be held in confidence by the State pursuant to applicable federal, state and local laws and regulations) or which, in the case of tangible materials provided to Developer by the State pursuant to its performance under this Agreement, is marked as confidential, proprietary or with a similar designation by the State. "Confidential Information" includes, but is not limited to, the Covered Code. In the case of information of either Developer or the State "Confidential Information" shall exclude any information (including this Agreement) that is publicly available pursuant to the Michigan Freedom of Information Act, 1976 Public Act No. 442, as amended, MCL 15.231, *et. seq.*

### 14.3. Degree of Care.

The State and Developer will each use at least the same degree of care to prevent disclosing to third parties the Confidential Information of the other as it employs to avoid unauthorized disclosure, publication or dissemination of its own confidential information of like character, but in no event less than reasonable care. Neither Developer nor the State will (i) make any use of the Confidential

Information of the other except as contemplated by this Agreement, (ii) acquire any right in or assert any lien against the Confidential Information of the other, or (iii) if requested to do so, refuse for any reason to promptly return the other party's Confidential Information to the other party. Each party will limit disclosure of the other party's Confidential Information to employees and Subcontractors who must have access in order to fulfill the purposes of this Agreement.

#### 14.4. Public Information.

Notwithstanding the foregoing, the provisions of Section 14 will not apply to any particular information which the State or Developer can demonstrate (i) was, at the time of disclosure of it, in the public domain; (ii) after disclosure of it, is published or otherwise becomes part of the public domain through no fault of the receiving party; (iii) was in the possession of the receiving party at the time of disclosure of it without an obligation of confidentiality; (iv) was received after disclosure of it from a third party who had a lawful right to disclose such information without any obligation to restrict its further disclosure; or (v) was independently developed by the receiving party without reference to Confidential Information of the furnishing party.

Further, the provisions of Section 14 will not apply to any particular Confidential Information to the extent the receiving party is required by law to disclose such Confidential Information, provided that the receiving party (i) promptly provides the furnishing party with notice of the legal request, and (ii) assists the furnishing party in resisting or limiting the scope of such disclosure as reasonably requested by the furnishing party.

#### 14.5. No Disclosure Obligation.

Nothing contained in this Section 14 shall be construed as obligating a party to disclose any particular Confidential Information to the other party, or as granting to or conferring on a party, expressly or impliedly, any right or license to the Confidential Information of the other party.

#### 14.6. Irreparable Harm

Each party acknowledges that, if it breaches (or attempts or threatens to breach) its obligations under Section 14, the other party may be irreparably harmed. Accordingly, if a court of competent jurisdiction should find that a party has breached (or attempted or threatened to breach) any such obligations, the non-breaching party shall be entitled to seek an injunction preventing such breach (or attempted or threatened breach) unless such injunction would create an unreasonable risk for the safety and security of the public and/or State employees.

#### 14.7. Survival.

The parties' respective obligations under this Section 14 shall survive the termination or expiration of this Agreement for any reason.

### **SECTION 15: INSURANCE**

#### 15.1. Insurance.

The Developer is required to provide proof of the minimum levels of insurance coverage as indicated below. The purpose of this coverage shall be to protect the State from claims which may arise out of or result from the Developer's performance of services under the terms of this Agreement, whether such services are performed by the Developer, or by any subcontractor, or by anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable.

The Developer waives all rights against the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees and agents for recovery of damages to the extent these damages are covered by the insurance policies the Developer is required to maintain pursuant to this Agreement.

All insurance coverages provided relative to this Agreement are PRIMARY and NON-CONTRIBUTING to any comparable liability insurance (including self-insurances) carried by the State.

The insurance shall be written for not less than any minimum coverage specified in this Agreement or required by law, whichever is greater.

The insurers selected by Developer shall have an A.M. Best rating of A or better, or as otherwise approved in writing by the State, or if such ratings are no longer available, with a comparable rating from a recognized insurance rating agency. All policies of insurance required in this Agreement shall be issued by companies that have been approved to do business in the State.

See [http://www.mi.gov/cis/0,1607,7-154-10555\\_22535---,00.html](http://www.mi.gov/cis/0,1607,7-154-10555_22535---,00.html).

Where specific limits are shown, they are the minimum acceptable limits. If Developer's policy contains higher limits, the State shall be entitled to coverage to the extent of such higher limits.

Before the Agreement is signed by both parties or before the purchase order is issued by the State, the Developer must furnish to the Director of Acquisition Services, certificate(s) of insurance verifying insurance coverage ("Certificates"). The Certificate must be on the standard "accord" form or equivalent. **THE CONTRACT OR PURCHASE ORDER NO. MUST BE SHOWN ON THE CERTIFICATE OF INSURANCE TO ASSURE CORRECT FILING.** All Certificate(s) are to be prepared and submitted by the Insurance Provider. All Certificate(s) shall contain a provision indicating that coverages afforded under the policies WILL NOT BE CANCELLED, MATERIALLY CHANGED, OR NOT RENEWED without THIRTY (30) days prior written notice, except for ten (10) days for non-payment of premium, having been given to the Director of Acquisition Services, Department of Management and Budget. The notice must include the Agreement or Purchase Order number affected and be mailed to: Director, Acquisition Services, Department of Management and Budget, P.O. Box 30026, Lansing, Michigan 48909. Failure to provide evidence of coverage, may, at the State's sole option, result in this Agreement's termination.

The Developer is required to pay for and provide the type and amount of insurance checked  below:

1. Commercial General Liability with the following minimum coverage:

- \$2,000,000 General Aggregate Limit other than Products/Completed Operations
- \$2,000,000 Products/Completed Operations Aggregate Limit
- \$1,000,000 Personal & Advertising Injury Limit
- \$1,000,000 Each Occurrence Limit
- \$500,000 Fire Damage Limit (any one fire)

The Developer must list the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees and agents as ADDITIONAL INSUREDS on the Commercial General Liability certificate. The Developer also agrees to provide evidence that insurance policies contain a waiver of subrogation by the insurance company.

2. If a motor vehicle is used to provide services or products under this Agreement, the Developer must have vehicle liability insurance on any auto including owned, hired and non-owned vehicles used in Developer's business for bodily injury and property damage as required by law.

The Developer must list the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees and agents as ADDITIONAL INSUREDS on the vehicle liability certificate. The Developer also agrees to provide evidence that insurance policies contain a waiver of subrogation by the insurance company.

3. Workers' compensation coverage must be provided in accordance with applicable laws governing the employees and employers work activities in the state of the Developer's domicile. If the applicable coverage is provided by a self-insurer, proof must be provided of approved self-insured authority by the jurisdiction of domicile. For employees working outside of the state of qualification, Developer must provide appropriate certificates of insurance proving mandated coverage levels for the jurisdictions where the employees' activities occur.

Any certificates of insurance received must also provide a list of states where the coverage is applicable.

The Developer also agrees to provide evidence that insurance policies contain a waiver of subrogation by the insurance company. This provision shall not be applicable where prohibited or limited by the laws of the jurisdiction in which the work is to be performed.

4. Employers liability insurance with the following minimum limits:

- \$100,000 each accident
- \$100,000 each employee by disease
- \$500,000 aggregate disease

**B. Subcontractors**

Except where the State has approved in writing a Developer subcontract with other insurance provisions, Developer shall require all of its Subcontractors under this Agreement to purchase and maintain the insurance coverage as described in this Section for the Developer in connection with the performance of work by those Subcontractors. Alternatively, Developer may include any Subcontractors under Developer's insurance on the coverage required in this Section. Subcontractor(s) shall fully comply with the insurance coverage required in this Section. Failure of Subcontractor(s) to comply with insurance requirements does not limit Developer's liability or responsibility.

**C. Certificates of Insurance and Other Requirements**

Developer shall furnish to the Office of Acquisition Services certificate(s) of insurance verifying insurance coverage or providing satisfactory evidence of self-insurance as required in this Section (the "Certificates"). Before the Agreement is signed, and not less than 20 days before the insurance expiration date every year thereafter, the Developer shall provide evidence that the State and its agents, officers and employees are listed as additional insureds, but only to the extent of liabilities assumed by Developer as set forth in Indemnification Section of this Agreement, under each commercial general liability and commercial automobile liability policy. In the event the State approves the representation of the State by the insurer's attorney, the attorney may be required to be designated as a Special Assistant Attorney General by the Attorney General of the State of Michigan.

Developer shall maintain all required insurance coverage throughout the term of the Agreement and any extensions thereto and, in the case of claims-made Commercial General Liability policies, shall secure tail coverage for at least three (3) years following the expiration or termination for any reason of

this Agreement. The minimum limits of coverage specified above are not intended, and shall not be construed, to limit any liability or indemnity of Developer under this Agreement to any indemnified party or other persons. Developer shall be responsible for all deductibles with regard to such insurance. If Developer fails to pay any premium for required insurance as specified in this Agreement, or if any insurer cancels or significantly reduces any required insurance as specified in this Agreement without the State's written consent, at the State's election (but without any obligation to do so) after the State has given Developer at least thirty (30) days written notice, the State may pay such premium or procure similar insurance coverage from another company or companies; and at the State's election, the State may deduct the entire cost (or part thereof) from any payment due Developer, or Developer shall pay the entire cost (or any part thereof) upon demand by the State.

## SECTION 16: GENERAL

16.1. Waiver. Neither party's waiver of a breach or delay or omission to exercise any right or remedy shall be construed as a waiver of any subsequent breach or as a waiver of such right or remedy.

16.2. Governing Law and Jurisdiction. This Agreement shall be governed by and construed under the laws of the State of Michigan, U.S.A., without reference to any conflicts of law provisions. Developer irrevocably consents with respect to any claims it has against the State, arising out of or in connection with this Agreement, to the exclusive jurisdiction of the Michigan Court of Claims or the Ingham County Circuit Court, in whichever court jurisdiction may be proper, and, with respect to any action by the State against Developer, to the exclusive jurisdiction of the applicable State of Michigan District or Circuit Court. With respect to any claim between the parties, Developer consents to venue in Ingham County, Michigan, and irrevocably waives any objections it may have to such jurisdiction on the grounds of lack of personal jurisdiction of such court or the laying of venue of such court or on the basis of forum non conveniens or otherwise. Developer agrees to appoint agents in the State of Michigan to receive service of process.

16.3. Compliance with Laws. The Developer and Affiliates and subcontractors, shall take notice of and adhere to any and all applicable state and federal statutes, and local ordinances, and legal requirements. The Developer assumes sole liability for any non-compliance with these regulations and legal requirements.

16.4. Entire Agreement. This Agreement constitutes the entire agreement between the parties concerning the subject matter hereof and supersedes all preliminary communications, whether oral or written, between the parties relating to the subject matter of this Agreement.

16.5. License Copies. The Developer agrees to provide a record of sale for every license to Affiliates concerning the Software to the State within thirty (30) business days of signing the license.

16.6. No Third Party Beneficiaries. Nothing express or implied in this Agreement is intended to confer, nor shall anything herein confer, upon any person other than the State and their respective successors or assigns, any rights, remedies, obligations or liabilities whatsoever.

16.7. Effective Date. This Agreement is effective upon receipt of the last approval necessary and the affixing of the last signature required.

16.8. Amendments. This Agreement may not be modified, amended, extended, or augmented, except by a writing executed by the parties in the same manner as this Agreement was originally

approved, and any breach or default by a party shall not be waived or released other than in a writing signed by the other party.

16.9. Survival. The terms, provisions, representations, and warranties contained in this Agreement that by their sense and context are intended to survive termination shall so survive termination of this Agreement. All references to survival of various provisions set forth specifically are for illustration purposes only and are not to be interpreted to limit the survivability of any provisions not having such specific designations.

16.10 Severability. Each provision of this Agreement shall be deemed to be severable from all other provisions of this Agreement and, if one or more of the provisions of the Agreement shall be declared invalid, the remaining provisions of the Agreement shall remain in full force and effect.

The undersigned acknowledge that he/she has read, understood and agrees to the terms and conditions contained in this Agreement. The undersigned represents to have all necessary consents, approvals and full legal right and authority to execute this Agreement.

**STATE OF MICHIGAN**

By: \_\_\_\_\_  
Steven Chester, Director

Michigan Department  
Of Environmental Quality

STATE OF MICHIGAN    )  
                                  ) ss.  
COUNTY OF \_\_\_\_\_)

The foregoing instrument was acknowledged before me this \_\_\_\_ day of \_\_\_\_\_, 2003, by Steven Chester, Director of the Michigan Department of Environmental Quality on behalf of the State of Michigan.

\_\_\_\_\_  
Notary Public, \_\_\_\_\_ County, Michigan  
My Commission Expires:

By: \_\_\_\_\_  
Norm Buckwalter, Deputy Director

Michigan Department  
Of Information Technology

STATE OF MICHIGAN    )  
                                  ) ss.  
COUNTY OF \_\_\_\_\_)

The foregoing instrument was acknowledged before me this \_\_\_\_ day of \_\_\_\_\_, 2003, by Norm Buckwalter, Deputy Director of the Michigan Department of Information Technology on behalf of the State of Michigan.

\_\_\_\_\_  
Notary Public, \_\_\_\_\_ County, Michigan  
My Commission Expires:

DEVELOPER:

**ENFOTECH & CONSULTING, INC.**

By: \_\_\_\_\_

Tony Jeng

Executive Vice

President

STATE OF MICHIGAN    )  
                                  ) ss.  
COUNTY OF \_\_\_\_\_)

The foregoing instrument was acknowledged before me this \_\_\_ day of \_\_\_\_\_, 2003, by Tony Jeng who is Executive Vice President of EnfoTech & Consulting, Inc., a New Jersey corporation, on behalf of the corporation.

\_\_\_\_\_  
Notary Public, \_\_\_\_\_ County, Michigan

My Commission Expires:

This Agreement was approved by the Michigan State Administrative Board on:

State Administrative Board:

\_\_\_\_\_  
Governor Jennifer M. Granholm  
Chairperson  
State Administrative Board

\_\_\_\_\_  
Sherri Bond  
Secretary  
State Administrative

\_\_\_\_\_  
Board  
State of Michigan, County of Ingham.

The foregoing instrument was acknowledged before me on this \_\_\_\_\_ day of \_\_\_\_\_, 2004, by Governor Jennifer M. Granholm and Sherri Bond, Chairperson and Secretary, respectively, of the State Administrative Board on behalf of the State of Michigan.

\_\_\_\_\_  
Notary Public in the County of \_\_\_\_\_,  
Acting in the County of Ingham, State of Michigan.

My commission expires: \_\_\_\_\_.

Exhibit A

/\*\*\*\*\*

Copyright Notice

Copyright © 2004. Michigan Department of Environmental Quality. All Rights Reserved.

The contents of this file are subject to the Michigan NMS License (the “License”); you may not use this file except in compliance with the License.

The Original Code is Michigan NMS code, released 2004.

THE SOFTWARE IS PROVIDED “AS-IS” AND WITHOUT WARRANTY OF ANY KIND, EXPRESS, IMPLIED OR OTHERWISE, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

UNDER NO CIRCUMSTANCES AND UNDER NO LEGAL THEORY, WHETHER TORT (INCLUDING NEGLIGENCE), CONTRACT, OR OTHERWISE, SHALL THE INITIAL DEVELOPER, ANY OTHER CONTRIBUTOR, OR ANY DEVELOPER OF COVERED CODE, OR ANY SUPPLIER OF ANY OF SUCH PARTIES, BE LIABLE TO YOU OR ANY OTHER PERSON FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY CHARACTER INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF GOODWILL, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, OR ANY AND ALL OTHER COMMERCIAL DAMAGES OR LOSSES, EVEN IF SUCH PARTY SHALL HAVE BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. THIS LIMITATION OF LIABILITY SHALL NOT APPLY TO LIABILITY FOR DEATH OR PERSONAL INJURY RESULTING FROM SUCH PARTY’S NEGLIGENCE TO THE EXTENT APPLICABLE LAW PROHIBITS SUCH LIMITATION. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THAT EXCLUSION AND LIMITATION MAY NOT APPLY TO YOU.

Call EnfoTech & Consulting, Inc. for more information.

Notices of copyright and/or attribution that appear at the beginning of any file included in this distribution must remain intact.

See the License for the specific language governing rights and limitations under the License.

\*\*\*\*\*/

## Exhibit B

### Source Code Files

#### **Main Class of Library:**

DelCache.bat  
eftControls.dll  
EnfoTech.DB.dll  
EnfoTech.IO.dll  
EnfoTech.Windows.Forms.dll  
EnfoTeh.Log.dll  
NMS.BaseClass.dll  
NMS.BizLogic.FormsLogic.dll  
NMS.Data.dll  
NMS.DB.DataSet.dll  
NMS.DB.dll  
NMS.Exception.dll  
NMS.IO.dll  
NMS.Log.dll  
NMS.Manageable.dll  
NMS.Migration.dll  
NMS.Reports.dll  
NMS.Security.dll  
NMS.Utility.dll  
NMS.Utility.WordVBA.dll  
NMS.Windows.Forms.dll  
NMS.Windows.FormsHandler.dll  
NMS2.exe  
NMSDocSetup.bat

#### **Application Configuration File:**

app.config

#### **Document Template:**

DMR\_A.pdf  
DMR\_B.pdf  
NMS.dot

**Multimedia/Image Files:**

AlBasins.htm  
Hydrological Map.htm  
Wellhead Protection Area.htm  
MI City Map.gif  
nms\_app.ico  
nms\_splash.jpg  
start.jpg  
USA Map.gif

**Reports:**

RptCaseSearchResult.rpt  
RptEnforcementSearchResult.rpt  
RptFacilityAbb.rpt  
RptFacilityFactSheet.rpt  
RptFacilitySearchResult.rpt  
RptFacilityTypeList.rpt  
RptInspectionPlan.rpt  
RptInspectionSearchResult.rpt  
RptParameterList.rpt  
RptPermitSearchResult.rpt  
RptPermitStatusList.rpt  
RptPermitTypeList.rpt  
RptSampleFrequencyList.rpt  
RptSampleTypeList.rpt  
RptSupplicationSearchResult.rpt  
RptViolationSearchResult.rpt  
RptWasteWaterList.rpt  
RptWATList.rpt

Form No. DMB 234 (Rev. 1/96)  
 AUTHORITY: Act 431 of 1984  
 COMPLETION: Required  
 PENALTY: Contract will not be executed unless form is filed

STATE OF MICHIGAN  
 DEPARTMENT OF MANAGEMENT AND BUDGET  
 ACQUISITION SERVICES  
 P.O. BOX 30026, LANSING, MI 48909  
 OR  
 530 W. ALLEGAN, LANSING, MI 48933

March 16, 2004

**CHANGE NOTICE NO. 6**  
**TO**  
**CONTRACT NO. 071B1001740**  
**between**  
**THE STATE OF MICHIGAN**  
**and**

NAME & ADDRESS OF VENDOR		TELEPHONE Tony Jeng <b>(609) 896-9777</b>
<b>Enfotech &amp; Consulting, Inc.</b> <b>11 Princess Road, Unit A</b> <b>Lawrenceville, NJ 08648</b>  <b>tony_jeng@enfotech.com</b>		VENDOR NUMBER/MAIL CODE
		BUYER (517) 241-1647 <b>Irene L. Pena</b>
Contract Administrator: Patty Bogard <b>Consulting Services for an Electronic Wastewater Discharge Reporting System –          Department of Environmental Quality</b>		
CONTRACT PERIOD: From: <b>August 27, 2001</b> To: <b>September 30, 2004</b>		
TERMS	<b>N/A</b>	SHIPMENT <b>N/A</b>
F.O.B.	<b>N/A</b>	SHIPPED FROM <b>N/A</b>
MINIMUM DELIVERY REQUIREMENTS <b>N/A</b>		

**NATURE OF CHANGE (S):**

Please note effective immediately this contract is hereby **INCREASED** by \$24,000.00 to cover the attached work.

**AUTHORITY/REASON:**

Per vendor and agency agreement.

**INCREASE: \$24,000.00**

**TOTAL REVISED ESTIMATED CONTRACT VALUE: \$2,655,187.00**

**Proposal for  
Electronic Groundwater Module  
In E2 and Integration with NMS**

**Submitted to  
Michigan Department of Environmental Quality  
Lansing, Michigan**

Prepared by  
enfoTech & Consulting Inc.  
Lawrenceville, New Jersey 08648  
(609) 896-9777  
February 2, 2004



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## 1 Project Overview

This proposal is prepared for the Water Quality Division of the Michigan Department of Environmental Quality (MDEQ) to retain enfoTech & Consulting Inc. (enfoTech) to perform expanding of the E2 System to add electronic Compliance Monitoring Reporting (CMR) module for the ground water compliance program.

The project scope includes:

- Expand the E2 to include on-line data submission for CMR
- Integration of E2 and NMS for:
  - Send acknowledgement of data receipt to the CMR submitter
  - Process CMR data to NMS
  - Send acknowledgement of data processing to the CMR submitter
  - Track historical CMR submissions on E2

### 1.1 Business Objectives to be Achieved by the Project

The Water Division's Groundwater Section of DEQ's Groundwater Program issues groundwater permits and receives compliance monitoring reports that are required by Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). Based on the calendar year 2002, a total of 248 new applications were received. And out of the 248 applications received, 85 of them were covered under the highest potential risk discharger of Rule 2218.

The Water Division issues groundwater permits and receives compliance reporting information submitted quarterly from over 500 permitted groundwater discharger facilities. It is the goal of the Water division to issue timely authorization for discharges to groundwater. It is also the goal of the Water Division to make sure that facilities with groundwater authorizations remain in compliance with the groundwater standards. Due to reductions in program resources (since the mid-1990's) and the recent reorganization, the number of groundwater staff has been greatly reduced. To keep the groundwater permits issued on time and to make sure that issued permits are in compliance, the groundwater staff need updated application to efficiently conduct the Groundwater Program. The business of processing groundwater permits is very similar to the business of processing NPDES permits. Thus, the expansion of the NMS to support regulatory compliance functions required by the Groundwater Permit Program has been underway and the project is near completion.

In WQD's commitment in continuous improvement of operation for efficiency and cost savings, groundwater program feels a strong need to find an electronic reporting alternative to replace the existing paper-based Compliance Monitoring Reporting (CMR) tracking. MDEQ has already implemented a very successful electronic reporting system, E2, for NPDES DMR reporting and is fully integrated with NMS. This project is designed to tap into the existing E2/NMS electronic reporting capability and expand the capability for the CMR reporting. Automating the CMR process will save valuable WQD resources which are premium commodity in current competitive work environment.

E2 Expansion for e-GW Module

Completion of the e-Groundwater project will provide the following benefits to WQD:

- Save WQD resources to manually track and enter CMR
- Provide the facility with a fast, easy, and efficient way of submitting CMR. An valued- added service from Michigan government to the regulated community
- Reduce the Facility compliance costs by offering a streamlined report submission method, readily available computer tools, reduce wait time, and eliminate paper, and associate tracking/handling costs.
- Provide fast and easy validation and compliance via integration with existing NMS system
- Improve accuracy of compliance data by eliminating potential errors that otherwise would be introduced through manual and/or redundant data entry.
- Improve the overall effectiveness of the WQD groundwater management program with faster responses for report processing, data analyses, compliance assessment, enforcement support, and other water quality management decision-making.

The deliverables of this project shall include the following:

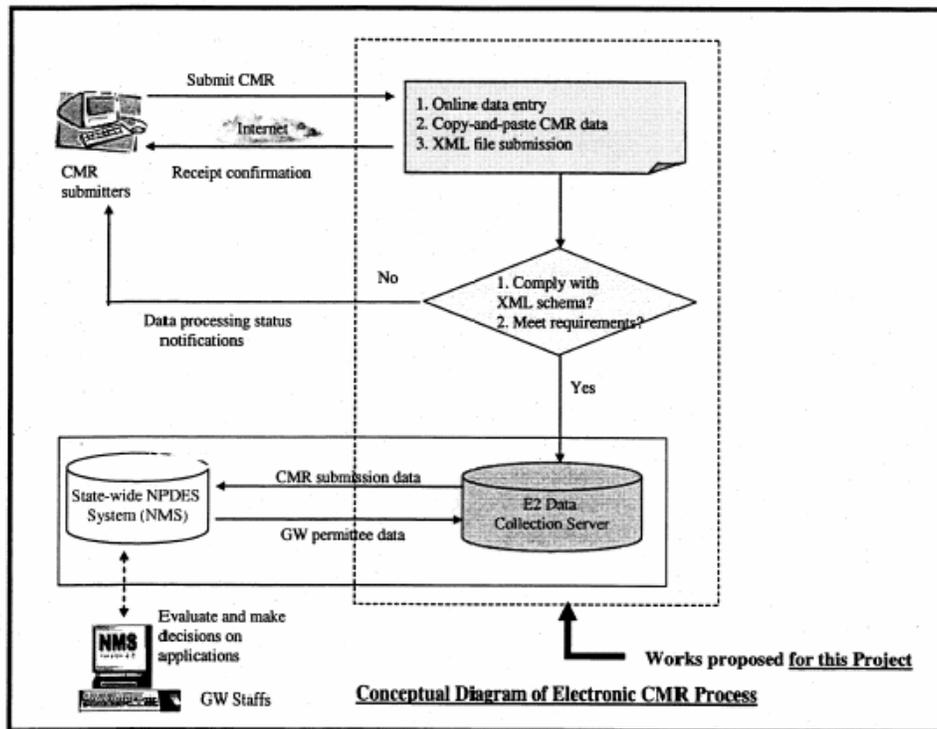
1. Develop a Functional Requirement Document for CMR data entry screens<sup>1</sup>
2. Prototype the e-CMR data entry screens. There are 4 CMR data entry forms and each form is a 1-page format.
3. Prototype NMS Modifications which include
  - e-CMR to NMS data loading
  - CMR data tracking in NMS
3. Finalize e-Groundwater Module and NMS Integration
4. Provide Documentations
  - e-Groundwater Module
  - NMS modifications
5. Installation & Training that include:
  - Final installation of the e-Groundwater Module and NMS modifications
  - Training to WQD staff

## 2 Project Description

The proposed Project will build on the existing E2 and NMS systems to provide the e-Groundwater for electronic CMR reporting. For the E2 system expansion, the project will provide an additional data flow to address the electronic CMR data entry/submission for groundwater. The preliminary concept of system functionality is illustrated in the following diagram:

<sup>1</sup> The existing E2 process for DMR is compatible with the CMR and will require only change to the CMR data entry screen. The e-DMR XML schema will be used for e-CMR submissions.

E2 Expansion for e-GW Module



2.1 Overview of the Proposed System Functions:

A high-level description of the system features to be completed by the Project is provided below:

1. **User Account:** GW permit holders could manage their e-GW user accounts. Authorized representatives for each GW permit will be managed in NMS and be uploaded to E2.
2. **CMR Submissions:** GW permit holders could submit CMR using Internet. Submission options include: (1) on-line data entry, (2) copy-and-paste, (3) XML file upload.
3. **Receipt Confirmation:** CMR submitter will receive an online receipt confirmation upon submission. The authorized GW permit holder will also receive a receipt confirmation via email upon each CMR submission.
4. **CMR Data Processing Status Notification:** The authorized representative of the GW permit holder will automatically receive a data processing status email from E2 after the CMR data has been processed and uploaded to NMS.
5. **Tracking of CMR reports:** GW permit holder could review historical CMR data submissions on E2.

E2 Expansion for e-GW Module

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6. **Security and Chain-of-Custody of e-CMR submissions:** The entire e-CMR submission process will be managed by a secured server and the chain-of-custody of each transaction will be recorded at E2. This function is already provided by E2 and will provide the environmental regulatory assurance for electronic reporting.

### 3 Infrastructure Requirements for the e-Groundwater Module

Michigan WQD already implemented NMS 2.0 and the E2 systems. Both two systems are in production with sufficient infrastructure resources to support their operations.

This project is designed to build on the existing systems. Based on our preliminary analysis, we do not anticipate purchase of any new major infrastructure. However, we will work with MDIT to monitor system usage to assess infrastructure needs as the Project evolves.

## 4 Project Work Plans

### 4.1 Project Methodology

EnfoTech recommends the evolutionary iterative (EI) method for system development. The EI model will provide several benefits to the project as follows:

- Definition of draft Functional Requirement Specifications (FRS)
- End users are actively involved in reviewing and commenting on the system during the development cycle (evolutional circular iteration)
- FRS is continuously updated to reflect design and implementation changes
- End products will have a high degree of match to user expectations

To facilitate the EI development model, enfoTech recommends some site visits during the critical project phases including the system specifications, prototyping discussion, system pre-final, installation, training, and support. Additional site visits might be required based on project needs. Frequency of site visits will be adjusted based on project tasks and the need for a face-to-face meeting. The goal is to complete the project on time, within budget, and to meet user requirements.

For the initial Functional Requirement Specifications development, upon the project kick-off, enfoTech proposes to send certain core members of the project team to conduct site visits and work closely with the WQD and MDIT to develop the system specifications. Objectives of each FRS visit are described below:

1<sup>st</sup> visit – develop requirements for the e-CMR Module and NMS changes. General system infrastructure requirements and support will also be discussed at the meeting.

2<sup>nd</sup> visit – Review the e-CMR module prototype and NMS modifications with WQD/MDIT. Discuss a draft implementation schedule and project administration procedures for the implementation phase.

## E2 Expansion for e-GW Module

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3<sup>rd</sup> visit – Finalize e-CMR module and NMS modifications with WQD/MDIT. Expand the document to include a final implementation plan.

Other site visits and detailed project tasks will be developed during the project kick-off meeting, and communicated to the WQD project manager for future project management purposes.

### 4.2 Project Management

EnfoTech will comply with project reporting requirements as required by the State of Michigan office of project management.

Our standard project management procedures include:

- Develop a project plan that will outline milestones, tasks, and schedule for project tracking
- Submit to the MDIT a project plan that will outline major milestones, work breakdown structure, and the schedule of each task
- Submit monthly project progress reports to the MDIT that will outline accomplishments and tasks planned for the following month. Conference calls and WebEx meetings will also be used to communicate with the WQD/MDIT on a regular basis
- Submit monthly fees and expenses to the MDIT for review and approval

Examples of the enfoTech's monthly reporting are provided in Attachment A.

## 5 EnfoTech Capabilities in Implementing the Proposed System

EnfoTech has over three years of working relationship with WQD and MDIT. Over past three years, enfoTech has successfully implement the NMS (version 2.0) and the E2 systems. Both two systems are in product and have received favorable review by WQD and MDIT.

EnfoTech has been providing environmental systems and software consulting services to State agencies, municipalities, and the chemical industry since 1992. We have an off-the-shelf E2 system currently used by WQD for electronic receipt and process of wastewater Discharge Monitoring Report (DMR). The E2 meets the WQD e-DMR system requirements as well as the security requirements from the CROMERR rules (UPEPA pre-proposed regulations for electronic DMR submissions).

EnfoTech also participates heavily in the National Environmental Information Exchange Network projects. Our Exchange Network experience will offer WQD the following unique knowledge and expertise:

- Recognized national leader in environmental XML schema development
- Expert in EPA's environmental data standards and XML design guidelines

E2 Expansion for e-GW Module

- Lead developer of the national environmental Core Reference Model (CRM) for electronic data exchange of environmental data
- Expert in XML registry system

EnfoTech provides a group of high-caliber IT technology expert who stay on top of technologies. It has an advanced "Innovation Center" dedicated to research and innovation of IT technologies to support today's increasing information management challenges required by the changing and complex business environment.

EnfoTech is staffed with a team of engineers and system developers who are specialized in environmental information systems and environmental regulations. EnfoTech has essential qualifications, technical expertise, and most importantly, the commitment and dedication to successfully implement the Project for WQD that will meet the users' requirements.

5.1 Technical Expertise

EnfoTech's technical strength has been on relational database (SQL) development and Graphic User Interface (GUI) in an object-oriented programming environment. We have a team of experts who are specialized in standard system development tools like Visual Basic, Visual InterDev, Active Server Page (ASP), Microsoft Transaction Server (MTS), SQL Server, ORACLE, etc., in Windows 2000 environment. Our projects have been developed on those industrial standard platforms for expandability and ease of maintenance. EnfoTech is also the first company in the nation to implement a working Internet-based electronic DMR system.

EnfoTech's strategic directions in the system development environment have been and will continue to be in providing N-tiered client-server computing, object-oriented developing, and Internet-based solutions. We believe that MDEQ's interest and strategic direction in system architecture matches very well with enfoTech's technical expertise and system development strategy.

5.2 Regulatory Expertise

Another unique qualification of enfoTech's, that will enable us to provide a successful NMS/e-CMR system for the MDEQ, is its expert knowledge of water regulations and contacts with the EPA and the States on on-going regulatory development. We have a team of engineers who are familiar with 40CFR, abreast with environmental notices published on the Federal Register, and State regulations. The engineering team has established a working relationship with the EPA headquarters, the EPA Regional offices, State Agencies, and local municipalities through various projects on water-related issues in the past.

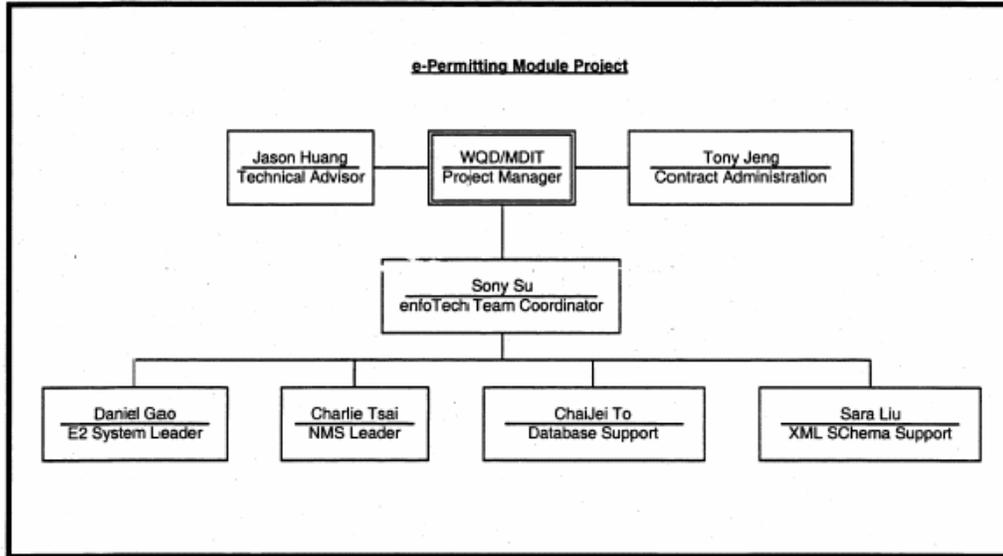
The Engineering team and the System development team work very closely together to ensure that system functions comply with regulatory guidelines. The team objectives are to work closely with the MDEQ and deliver a system to the users that can:

1. Provide accurate information in a timely manner,
2. Provide critical assistance in compliance management
3. Provide system functions to complement MDEQ's overall resource management

E2 Expansion for e-GW Module

5.3 enfoTech Project Team (proposed)

Two enfoTech staff members, one senior application consultant and one senior system developer, will be assigned to share the project coordination responsibilities and work closely with the WQD and MDIT. A preliminary proposed project team (major enfoTech personnel only) is illustrated in the following chart:



Mr. Tony Jeng will be responsible for contract administration for the entire project. He will work closely with the WQD/MDIT project manager and Mr. Sony Su (enfoTech Project Manager) to ensure that the project is completed on time, within budget, and meet the users' expectations.

Mr. Jason Huang will act as technical advisor to guide the project team for successful system implementation and technology excellence.

Mr. Sony Su will serve as the enfoTech team project manager. He will be responsible for developing the project document outlining major milestones, work break down tasks, and schedule. He will also be tracking the project progress and provide status reports to the WQD/MDIT project manager.

Educational backgrounds and project experiences for the key personnel planned for the project are provided below:

E2 Expansion for e-GW Module

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**Tony Jeng (Principal Application Consultant)**

**Education:** BS and MS in Chemical Engineering.

**Experience:** Mr. Jeng has over 20 years of regulatory and environmental engineering experience over a broad spectrum that includes wastewater treatment, drinking water standards, ground water monitoring, air emission calculation, dispersion modeling, hazardous waste treatment and disposal, maximum achievable control technology (MACT), SARA 313, and CERCLA programs. He has held various positions in different engineering capacities at state agencies, chemical manufacturing plants, and pharmaceutical production plants. Mr. Jeng is currently one of the principals of enfoTech & Consulting Inc.

**Primary responsibility:** Mr. Jeng will be responsible for the contract administration.

**Jason Huang (Principal System Consultant)**

**Education:** BA in Business and MS in Computer Science

**Experience:** Mr. Huang has over 15 years of experience in enterprise-wide system design, development, and implementation. Mr. Huang has delivered many corporate-wide missions critical application systems for major Fortune 100 companies to improve operations and save costs. He has held various key system development positions at companies such as Merck, Payne Weber, and Capital City/ABC to implement large-scale projects using SQL Server, ORACLE under Intranet and Internet environment. Mr. Huang is currently one of the principals at enfoTech & Consulting Inc and is providing the strategic direction for the Company in system research and product development.

**Primary responsibility:** Mr. Jason Huang will act as a technical advisor to guide the project team for successful system implementation and technology excellence.

**Sony Su (Senior Application Consultant)**

**Education:** BS in Chemical Engineering.

**Experience:** Mr. Su is current the account executive to all the Michigan IT projects. He is very familiar with the regulatory requirements for the NPDES program. He is a project coordinator for the NMS and E2 projects for the State of Michigan. He is intimately involved in design and implementation of the NMS version 2.0 and the Internet-based electronic E2 systems.

**Primary responsibility:** Mr. Su will coordinate communications from the WQD/MDIT end-user side to enfoTech team for the development of the functional specifications, system prototyping, implementation, training, and system documentation.

**Charlie Tsai (Senior System Consultant)**

**Education:** BS in Computer Science and MS in Management of Information Systems

**Experience:** Mr. Tsai is a senior System Consultant who specializes in N-tiered object oriented system development. He is the NMS product leader, and has been involved in design and implementation of the NMS since beginning. Mr. Tsai has six years of extensive experience in system development and Oracle database.

**Primary responsibility:** Mr. Tsai will provide crucial support on system aspect for the NMS modifications. He will provide guidance on integration between E2 and the NMS system.

E2 Expansion for e-GW Module

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**Daniel Gao (Senior System Consultant)**

**Education:** BS and MS in Computer Science

**Experience:** Mr. Gao specializes in N-tiered object oriented system development. He is one of the core members of the E2 system development team.

**Primary Responsibility:** Mr. Gao will provide system support to the e-Groundwater module development and integration with E2 and from E2 to NMS.

**Sean Lee (Senior System Consultant)**

**Education:** PhD in Biology and MS in Computer Science

**Experience:** Mr. Lee is a certified Oracle Consultant Professional and is expert in SQL Server database design and implementation. He is a key member to support NMS and E2 product development.

**Primary Responsibility:** Mr. Lee will provide database support to the e-Groundwater module and NMS development and integration between E2 and NMS.

**Sara Liu (Application Consultant)**

**Education:** Doctor of Medical Science and MS in Computer Information Science

**Experience:** Ms. Liu has extensive consulting experience on XML schema development, XSLT style sheets, and web form development. Her strength has been on SQL script development, technical documentation, and presentation. She is also being certified as an XML developer. Ms. Liu is very familiar with the regulatory requirements for the NPDES program. She has participated in the development of E2 development and supports XML schema development and revisions. She is an active member various national workgroups including ECOS data standards, XML Design Rule Policy, and XML Registry.

**Primary Responsibility:** Mr. Ali will provide engineering support to the project.

**Cindy Yang (System Consultant)**

**Education:** BS and MS in Computer Science

**Experience:** Ms. Yang specializes in N-tiered object oriented system development. She is one of core members on the NMS project. She has 4 years of system development and implementation experience in SQL Server database environment.

**Primary Responsibility:** Ms. Yang will provide system support to the project

## 6 Preliminary Project Schedule

We estimate that the e-CMR implementation will take about 4 to 6 months to complete. A detailed project work break down structure will be developed after a functional requirement specification document is developed with WQD and MDIT.

E2 Expansion for e-GW Module

**7 Project Cost Estimate**

**7.1 Cost Estimate**

EnfoTech offers competitive pricing for the services proposed for the project. An estimated project cost with breakdown for each project task is provided below.

<b>Product/Task Description</b>
<b>(A) Project Management/Facilitation/Expenses</b>
(1) Project Management/Reports
(2) WebEx Cost for Project Discussion
(3) Face-to-Face Meetings (three 2-day/Mtg)
(4) Other Direct Costs
<b>(B) Requirement Definition &amp; Schema Development</b>
(1) Development & document e-CMR Requirements
<b>(C) E2 Expansion and NMS Modification</b>
(1) E2 - Expansion to add a new e-GW tab in E2, minor Security, Admin adjustments
(2) E2 - CMR Data Entry Forms, style sheets, report tracking (4 forms, 1 page/form)
(3) E2 - NMS data loading to E2 (user accounts and requirements)
(4) E2 - E2 data loading to NMS (CMR data)
(5) Other Direct Costs
<b>(D) Installation/Testing/Documentation</b>
(1) System Testing
(2) System Documentation
(3) System Installation Support
(4) Training Support
(5) Other Direct Costs
<b>Grand Total for the Proposed Project: \$24,000</b>

Majority of the project cost could be funded through the existing approved contract for the NMS expansion for Groundwater program. Based on the existing NMS expansion for Groundwater project, additional funding of \$24,000 will be needed to supplement the existing fund.

**7.2 Payment Schedule and Payment Terms**

The MDEQ will be invoiced each month based on deliverables provided to WQD/MDIT. EnfoTech's standard payment terms are 30 days net from the invoice date.

E2 Expansion for e-GW Module

7.3 Rate Schedule for Consulting Services

This section provides a fee schedule for consulting services. All rates presented apply to services rendered during the calendar year 2004 and are subject to adjustment on January 1 of each subsequent year.

**HOURLY RATES**

Charges for services provided will be in accordance with the following schedule:

<u>Classification</u>	<u>Hourly Rate (\$/hour)</u>
Principal Application Consultant	\$ 180
Principal System Consultant	\$ 180
Senior System QA/QC Consultant	\$ 160
Senior Application Consultant	\$ 150
Senior System Consultant	\$ 150
System QA/QC Consultant	\$ 130
Application Consultant	\$ 120
System Consultant	\$ 120
Business Support	\$ 90

**8 Product Ownership and Source Code Confidentiality**

(8.1) E2 Expansion for e-Groundwater Module

E2 is an enfoTech product and is licensed to Michigan for use. In order to provide the most cost effective option to MDEQ and to capitalize previous e-DMR project success, the proposed e-Groundwater module will be designed to build on the E2 infrastructure and will use many basic E2 foundation classes. The design of e-Groundwater module could not function as a standalone module, and needs the E2 as the base in order to function. In addition, enfoTech has taken the approach to reduce the MDEQ project cost by including significant contribution of its own resource to cost sharing with MDEQ. Therefore, enfoTech proposes that the e-Groundwater module be considered an integrated part of the E2 and be owned by enfoTech.

MDEQ will have the right to access of the source codes for the purpose of system maintenance under the existing Source Code Confidentiality Agreement with enfoTech.

(8.2) NMS Modifications for e-Groundwater

NMS modifications source codes will be delivered to MDEQ upon request. MDEQ has the rights to make changes to the source codes. Change control procedures relating to source code changes under the Annual Technical Support Program will be discussed to arrive at certain mutually agreeable terms.

E2 Expansion for e-GW Module

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# **Attachment A**

**Example Monthly Project Report (Draft)**

**and**

**Example Monthly Activity and Spending Report**

E2 Expansion for e-GW Module

Attachment A – Example Monthly Project Report (Draft)

Date

Project Manager  
 e-Groundwater Project  
 Michigan Department of Information Technology  
 P.O. Box 30273  
 Lansing, MI 48909-7773

Subject: Project Activity Report for Period from 03/01/2004 to 03/31/2004 (MDEQ contract number: #####)

Dear Manager:

This letter provides a highlight of the e-Groundwater project for the month of ~~March~~ 2004.

Activity Highlights for March, 2004

A summary description of the project progress for the reporting period is provided here.....  
 An example is shown in the following table:

Milestone or Task Description	Progress Report (Percent Completed)			
	FRS or GDS	Database Design	Screen Dev.	Report Dev.
1. e-Groundwater module				
(1.a) Specification of enhancements				
(1.b) Development				
2. NMS Modifications				
(2.a) Functional Requirement Development	80 %	50 %	20 %	-
(2.b) Development	75 %	50 %	20 %	-

In addition, major project highlights and accomplishment will be identified below. For example:

- Project General:

General project activities are summarized here...

E2 Expansion for e-GW Module

Mr. Project Manager  
 e-Groundwater Project Report  
 March, 2004 Report  
 Page 2 of 2

- Functional Requirement Specifications:  
 FRS related activities are provided here...
  
- Database Design:  
 Database related activities are provided here...
  
- Tasks Planned for April, 2004  
 A summary description of the tasks planned for April, 2004 is provided here.....

**Spending for this reporting period:**

Description	Cost
1. Professional Service Fees	
2. Expenses (traveling and others)	
Total:	

Supporting document will be attached. Example of supporting documents are shown below:

**Invoices:**

One invoice (MDEQ-EGW-001) is enclosed for your approval.

**e-Groundwater Project Account Balance As of March 31, 2004:**

Description	Project Funding	Available Fund as of 03/01/2004	Invoice Amount This Period	Available Fund as of 03/31/2004	Percent Funding Available
e-Groundwater Project					
Total:					

Sincerely,

Tony Jeng

TJ;jh  
 cc: File - MDEQ

Form No. DMB 234 (Rev. 1/96)  
 AUTHORITY: Act 431 of 1984  
 COMPLETION: Required  
 PENALTY: Contract will not be executed unless form is filed

STATE OF MICHIGAN  
 DEPARTMENT OF MANAGEMENT AND BUDGET  
 ACQUISITION SERVICES  
 P.O. BOX 30026, LANSING, MI 48909  
 OR  
 530 W. ALLEGAN, LANSING, MI 48933

September 9, 2003

**CHANGE NOTICE NO. 5 (Revised, revised)**  
**TO**  
**CONTRACT NO. 071B1001740**  
**between**  
**THE STATE OF MICHIGAN**  
**and**

NAME & ADDRESS OF VENDOR		TELEPHONE Tony Jeng <b>(609) 896-9777</b>
<b>Enfotech &amp; Consulting, Inc.</b> <b>11 Princess Road, Unit A</b> <b>Lawrenceville, NJ 08648</b>  <b>tony_jeng@enfotech.com</b>		VENDOR NUMBER/MAIL CODE
		BUYER (517) 241-1647 <b>Irene L. Pena</b>
Contract Administrator: Patty Bogard <b>Consulting Services for an Electronic Wastewater Discharge Reporting System –                  Department of Environmental Quality</b>		
CONTRACT PERIOD: From: <b>August 27, 2001</b> To: <b>September 30, 2004</b>		
TERMS <b>N/A</b>	SHIPMENT <b>N/A</b>	
F.O.B. <b>N/A</b>	SHIPPED FROM <b>N/A</b>	
MINIMUM DELIVERY REQUIREMENTS <b>N/A</b>		

**NATURE OF CHANGE (S):**

The attached statements of work are hereby incorporated into this contract effective August 8, 2003. These statements of work were inadvertently left out of the original contract Change Notice #5 dated August 8, 2003.

**TOTAL ESTIMATED CONTRACT VALUE REMAINS: \$2,631,187.00**

CHANGE AUTHORIZATION REQUEST

Contract No. **071B1001740**

Change Authorization Request No. 5

I. General

This Change Authorization Request is subject to all terms and conditions of the subject contract between enfoTech and the State of Michigan. Except as expressly specified herein, all terms and conditions of the Contract shall remain in full force and effect upon execution of this request. This request is not valid until all parties sign it, the Issuing Office prepares a Contract Change Notice and the Department of Information Technology issues a Purchase Order for the Department of Environmental Quality.

Description of Change

The purpose of this change is to

1. Increase the contract by \$100,138 to provide vendor technical support. The original contract includes a provision for enfoTech to provide annual technical support of the NMS and e-DMR systems. It is critical for the DEQ to continue to have the systems maintained to provide needed service to DEQ staff and regulated customers. The terms and conditions of the support service are documented in the attached Service and Support Agreement from enfoTech.
2. Extend the contract 13 months to September 30, 2004 to provide technical support. The technical support period will begin 9/1/2003. To align the support service with the State fiscal year, the initial coverage period will be 13 months from 9/1/2003 through 9/30/2004.
3. Increase the contract by \$400,000 to provide e-DMR system expansion to support automation of the drinking water data flow. The DEQ has received approval for funding for an EPA readiness grant to use the e-DMR architecture already implemented to implement a drinking water (e-DWR) data flow that will enhance Michigan's ability to participate in the Exchange Network and to streamline efforts to flow drinking water data to the central data exchange (CDX). Refer to the attached e-DWR statement of work.
4. Increase the contract by \$246,901 to provide NMS system enhancements to include groundwater permitting. Refer to the attached groundwater permitting statement of work.
5. Add the option to extend the contract in one year increments for up to two additional years for technical support services beyond September 30, 2004. The option to extend will be based on evaluation of contractor work performance. Agreement details regarding cost of annual technical support shall be negotiated at the time the option is exercised.

Costs

Technical Support 9/1/2003 through 9/30/2004:	\$100,138
Drinking Water Reporting (e-DMR):	\$400,000
Groundwater Permitting:	<u>\$246,901</u>
Total	\$747,039

Impact on Contract

- Extend contract period to 9/30/2004 and include an option to extend for technical support services in one year increments for up to two additional years.

Signatures

Contractor

\_\_\_\_\_ By:



Title: Senior Vice President

Date: June 24, 2003

DIT Contract Administrator

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

DIT Project Manager

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

DEQ Program Administrator

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Michigan MDEQ NMS & e-DMR Annual Support Contract Agreement

**SERVICE AND SUPPORT AGREEMENT**

**(1) Overview**

Michigan Department of Information Technology (MDIT) retains enfoTech & Consulting Inc. to develop and implement the NPDES Information Management System (NMS version 2.0) for the Surface Water Quality Division users in order to support the NPDES compliance program mandated by USEPA. In addition, MDIT/WD (Licensee) also licenses enfoTech's (Licensor) E2 system to streamline Discharge Monitoring Report (DMR) data collection by electronically collecting DMR via Internet and flow the data directly to the NMS System.

The following table lists production dates for each System:

System	Description of Modules	Production Date
(1) NMS Phase I	Facility, Permit, Supplication, Document, DMR entry, and Task	6/1/2002
(2) e-DMR	E2 (DMR module)	5/1/2003
(3) NMS Phase II	Inspection	6/1/2003
	Schedule of Compliance	7/1/2003
	Violation	8/1/2003
	Enforcement	9/1/2003

This Agreement is an annual technical support and maintenance program established between MDIT/WD and enfoTech for providing professional services to MDIT/WD for effective operation of the NMS and E2 systems used at Michigan.

**(2) Agreement Period:**

This Agreement will cover the services from September 1, 2003 to September 30, 2004.

**(3) Fees and Payment:**

The annual support and maintenance fee for this Agreement is determined at \$100,138.00. The fee is due in full by September 1, 2003.

If new modules are added to the existing Systems during the effective period of this Agreement period, the support and maintenance support fee for new modules will be prorated at the prevailing rate (7% of project cost).

It is recognized by MDEQ and enfoTech that the System might continue to evolve and it is both parties' intention to keep the similar time cycle of annual support and maintenance agreement in the future.

**(4) Computer Systems Covered Under This Agreement:**

1. NPDES Information Management System (NMS) Version 2.0
2. E2 System (for the DMR Module and the embedded XML Utility)

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**enfoTech**

Michigan MDEQ NMS & e-DMR Annual Support Contract Agreement

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**(5) Service and Support Programs**

Services and support will be provided to the Programs listed above. Supports plans are renewable each year.

EnfoTech will provide WD maintenance, technical support, and general enhancements in connection with the Systems covered under this Agreement. These services include:

(5.a) User Support

- “Senior-level” voice technical support, Monday through Friday, 9:00 AM to 6:00 PM EST, with a guaranteed callback response of less than four hours and unlimited incidents;
- Email support with a guaranteed eight-hour acknowledgement;
- Internet and FTP technical support for technical services, documentation, system upgrades and new releases;
- Dial-up service via VPN/Terminal service on a high-speed Internet line for technical support on the Systems

(5.b) Site Visit Support

- Provide on-site technical consultation and user/system support to MDIT/WD on request.
- Actual site visit will be determined based on MDIT/WD needs. Each visit must be pre-approved by the Michigan program manager.
- Potential site visits will be provided for up to a total of six (6) man-day visits.
- Traveling costs (air tickets, rental car, hotel, meals, etc.) are already included part of the total service package in the annual support contract at no additional fee to MDIT/WD. No cost reduction will be made if less site visits are requested/needed by MDIT/WD.

**(5.c) General Enhancements and Bug Fixes**

- General Enhancements: are minor improvements to the existing functions.
- Bugs: “Bugs” are system errors that will cause the System to stop functioning or generate wrong results.
- All general enhancements and bug fixes will be addressed by enfoTech. WD and enfoTech will work together to prioritize all the system changes. System changes will be delivered to WD in accordance with the “Standard System Release Schedule” defined below.
- SQL Server 2003 database upgrade support

**(5.d) System Release Schedule**

- Standard System Release Schedule:
  - NMS v.2 : Monthly if needed
  - E2 : Monthly if needed
- For mission critical issue(s):
  - Mission critical issues: are (1) the system errors that, if not resolved, will cause the system to a total failure, or significantly impair the WD to continue using the system, or (2) system errors determined by Water Division management (with reasonable judgment) to be critical to meeting program area needs
  - Mission critical items will be acknowledged by enfoTech within 2 hours of receipt.

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**enfoTech**

Page 2 of 4

Michigan MDEQ NMS & e-DMR Annual Support Contract Agreement

enfoTech will initiate the work immediately and keep MDIT/WD apprised of the progress.

- Resolution will be provided to MDIT/WD as soon as technically and feasibly possible by enfoTech

**(6) Others**

1. MDIT/WD may renew said Agreement, for additional one-year periods, for a fee to be negotiated annually between MDIT/WD and enfoTech.
2. Additional on-site support is available, at the MDIT/WD's request, for an additional charge.
3. The maintenance and support services are contingent upon proper use of the MDIT/WD's hardware and the Licensed Programs and do not cover any portion of the Licensed Programs, which has been modified without enfoTech's approval.
4. enfoTech shall not be responsible to MDIT/WD for loss of use of the Licensed Programs or for any other liabilities arising from alterations, modifications, enhancements, additions, adjustments or other changes, which have been made to the Licensed Programs or its operating environment by other than authorized representatives of enfoTech. If, in the option of enfoTech, any such alterations, modifications, enhancements, additions, adjustments or other changes adversely affect enfoTech's ability to render maintenance service to the Licensed Programs, enfoTech reserves the right to discontinue services required under this Agreement upon thirty (30) day's prior written notice to MDIT/WD.
5. Major system upgrades are not covered under this Agreement. Cost for major system upgrade will be negotiated between MDIT/WD and enfoTech in the future when the upgrade becomes available.
6. Any service performed by enfoTech outside the scope of this Agreement shall be provided at enfoTech's prevailing time and material rates and terms.

**(7) Service Rate**

This section provides a fee schedule for consulting services for works that are outside of the Annual Support Contract Agreement. All rates presented apply to services rendered during this Annual Support Contract Agreement period. Rates are subject to adjustment for subsequent Annual Technical Support Contract period and will be negotiated with MDIT/WD before contract renewal.

**HOURLY RATES**

Charges for services provided will be in accordance with the following schedule:

<u>Classification</u>	<u>Hourly Rate (\$/hour)</u>
Principal Application Consultant	\$ 180
Principal System Consultant	\$ 180
Senior System QA/QC Consultant	\$ 160
Senior Application Consultant	\$ 150
Senior System Consultant	\$ 150
System QA/QC Consultant	\$ 130
Application Consultant	\$ 120
System Consultant	\$ 120
Business Support	\$ 90

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**enfoTech**

Michigan DEQ: Expansion of E2 to Include Drining Water Reporting



**DEPARTMENT OF INFORMATION TECHNOLOGY  
IT SERVICES  
STATEMENT OF WORK**

<b>Project Title:</b> Expansion of Michigan's e-DMR System to Support Electronic Drinking Water Reporting	<b>Period of Coverage:</b> 9/1/2003 to 6/30/2004
<b>Requesting Department:</b> MDEQ Water Division's Groundwater Section	<b>Date:</b> 6/25/2003
<b>Agency Project Manager:</b> Kristin Philip	<b>Phone:</b> 517/241-1238
<b>DIT Contract Liaison:</b> Michael Beaulac	<b>Phone:</b> 517/241-1708

Michigan DEQ: Expansion of E2 to Include Drining Water Reporting

**Brief Description of Services to be provided:**  
 (Please attach a detailed Work Statement to this request)

**BACKGROUND:**

Michigan is a USEPA Primacy State and MDEQ regulates public water supplies under the Safe Drinking Water Act (SDWA). Under Michigan's Public Drinking Water Program, water sampling and testing are required for:

1. **Community Water Supply Program:** There are approximately 1,500 community public water systems regulated under this program. All are required to submit laboratory data and many are required to submit operational data.
2. **Non-Community Water Supply Program:** There are approximately 10,500 institutions regulated under program. They are required to submit laboratory data and a few are required to submit operational data.

With the exception of laboratory data from the State Drinking Water Laboratory, all data required for running the community and non-community water supply programs is currently being entered manually into the databases. Only two (2) laboratories (both owned by the State) allow the MDEQ to retrieve their laboratory data for the purpose of data import to the WaterChem database. The current data flow process is time consuming, hard to configure, error prone, and is not the optimum setup for efficient and accurate data collection and reporting to USEPA.

MDEQ applied from USEPA for an Exchange Network Readiness Grant funding in March, 2003 to improve its current data collection process. MDEQ received a grant award from USEPA. The major goal of this project is to streamline data collection and data reporting to USEPA.

The proposed data flow, once completed, will provide a more efficient and secure procedure for the MDEQ to collect laboratory and MOR data and to report violation and inventory information to the USEPA. In addition, the new system components to be added by the Project would be completed under the Exchange Network Node implementation guidelines and XML schema which will eventually contribute to the Exchange Network data flow implementation.

**SCOPE OF WORK:**

This proposal is prepared for the Water Division of the Michigan Department of Environmental Quality (MDEQ) to retain enfoTech & Consulting, Inc. (enfoTech) to complete Expansion of the E2 to include the Drining Water Module.

Tasks planned for this project include:

1. **Expanding the existing E2 system to provide a Drinking Water Reporting (DWR) module that will allow all public water supply institutions (including community and non-community water supplies and laboratories) to submit laboratory data and MOR reports electronically to the MDEQ via the internet,**
1. **Flow the laboratory and MOR data from the Data Collection Server to the WaterChem database.**
3. **Flow MOR and laboratory data from WaterChem to SDWIS-State and WaterTrack.**

**PROJECT OBJECTIVE:**

Upon completion of this Project, the MDEQ will be able to:

1. **Expand the existing XML-based Data Collection Server (i.e., E2) to provide a Drinking Water Reporting (DWR) module that will allow all public water supply institutions (including community and non-community water supplies) to submit laboratory data and monthly operation reports (MORs) electronically to the MDEQ,**
2. **Provide technical assistance to the MDEQ for expansion of the WaterChem database to manage MOR data. MDEQ will take the lead on WaterChem database expansion.**
3. **Flow laboratory and MOR data to the WaterChem database.**
4. **Flow laboratory and MOR data from WaterChem to SDWIS-State and the non-community regulatory applications.**

Michigan DEQ: Expansion of E2 to Include Drining Water Reporting

<b>TO BE COMPLETED BY CONTRACTOR</b>	
(WRITTEN RESPONSE REQUIRED WITHIN 14 BUSINESS DAYS FROM RECEIPT OF AGENCY WORK STATEMENT)	
Response Approved : R Approved by Contractor Response Denied	Date: June 24, 2003
Reason for Denying:	
Signature of Contractor: 	

**TASKS:**

This Project consists of four (4) major components. Brief description of each component is provided below:

(1) Expansion of the Michigan Data Collection Server to include the DWR module

This project component will expand the existing Michigan Data Collection Server (i.e. E2) to include the DWR module. The module will allow the MDEQ to collect laboratory and MOR data from the regulated community via the internet.

(2) Expand the WaterChem database to provide MOR data management capability.

This project component will expand the WaterChem database to include additional modules for holding MOR data reported by facilities to the State. The database will be hosted on Microsoft SQL Server 2000.

(3) Flow Laboratory and MOR Data from the Michigan Data Collection Server to WaterChem

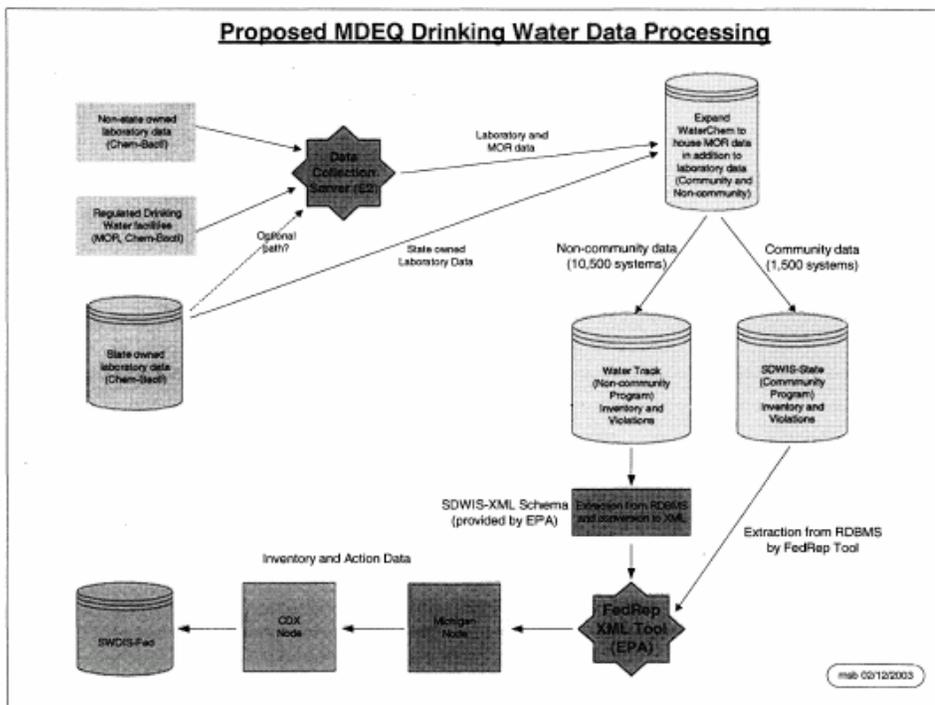
This project component will integrate the Michigan Data Collection Server with the WaterChem database for transfer of laboratory and MOR data.

(4) Flow data from WaterChem to SDWIS-State and WaterTrack

This component will flow data from WaterChem to the SDWIS-State and WaterTrack databases.

Upon completion, the following diagram illustrating Michigan's proposed data flow for the Community and Non-community water supply programs

Michigan DEQ: Expansion of E2 to Include Drinking Water Reporting



**DELIVERABLES:**

The Project will provide the following deliverables:

- (1) Expand the E2 to include the e-DWR module
- (2) Integrate E2 with Water Chem
- (3) Integrate the E2 with WaterChem MOR database module
- (4) Provide technical advices to MDEQ to expand WaterChem to manage MOR data
- (5) Develop business requirements for upto 5 additional e-DWR forms
- (6) Customize the E2 e-DWR module with additional web forms
- (7) Develop an Implementation Guide that includes Transmission Protocol, Application Pack, Implementation Guide
- (8) Assist MDEQ to conduct e-DWR pilot
- (9) Provide system installation
- (10) Provide User Training to MDEQ
- (11) Prepare a lesson learned report for the pilot phase
- (12) Provide Documentation (system doc., user guide, & online help)

Deliverables will not be considered complete until the Agency Project Manager has formally accepted them.

**SKILL SET/EXPERIENCE REQUIRED:**

Skills and experience required for this Project include:

- For business requirements:
  - Regulatory knowledge for the State of Michigan’s drinking water monitoring, inspection, compliance, and enforcement requirements

Michigan DEQ: Expansion of E2 to Include Drining Water Reporting

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- Design, development, and implementation knowledge of the E2 system
- For system development and integration:
  - Technology expertise in .Net related Web applications, Web services, XML, Web services implementation using industry standard protocols, such as UDDI, WSDL, SOAP, XML and HTTP, object-based Graphic User Interface (like C#, ASP.NET, VB.NET, etc.) and middle-tier components (like COM+, MTS, Microsoft .NET Assembly, etc.),
  - Security implementation experience on wide spectrum of security options, including traditional multi-layered security and emerging end-to-end message level security such as XKMS, WS-Security, and Cost analysis, and CROMERR requirements
  - Relational database design, and SQL Server 2000 implementations.
  - Systems integration
- For implementation:
  - Training manual and workshop

**PROJECT CONTROL AND REPORTS:**

A monthly progress report must be submitted to the Agency Project Manager through the life of this project. This report may be submitted with the billing invoice. Each monthly progress report must contain the following:

1. **Hours:** Indicate the number of hours expended during the past two weeks, and the cumulative total to date for the project. Also state whether the remaining hours are sufficient to complete the project.
2. **Accomplishments:** Indicate what was worked on and what was completed during the current reporting period.
3. **Funds:** Indicate the amount of funds expended during the current reporting period, and the cumulative total to date for the project.

**SPECIFIC DEPARTMENT STANDARDS:**

Agency standards, if any, in addition to DIT standards.

**PAYMENT SCHEDULE:**

All invoices should reflect actual work completed by payment date, and must be approved by the Agency Project Director prior to payment. Payment will be made on based on milestone and deliverable, if the Agency Project Manager deems work is progressing satisfactorily. In the event it is necessary for contractual staff to travel for this project, the project manager must obtain prior approval. Travel charges will be reimbursed at current state-authorized rates as outlined by DMB guidelines and must be accompanied by actual receipts.

Rate Schedule for Consulting Services

This section provides a fee schedule for consulting services. All rates presented apply to services rendered during the terms of this contract through September 30, 2004, and are subject to adjustment, if applicable, upon contract renewal and mutual agreement.

**1. HOURLY RATES**

Charges for services provided will be in accordance with the following schedule:

Michigan DEQ: Expansion of E2 to Include Drining Water Reporting

<u>Classification</u>	<u>Hourly Rate (\$/hour)</u>
Principal Application Consultant	\$ 180
Principal System Consultant	\$ 180
Senior System QA/QC Consultant	\$ 160
Senior Application Consultant	\$ 150
Senior System Consultant	\$ 150
System QA/QC Consultant	\$ 130
Application Consultant	\$ 120
System Consultant	\$ 120
Business Support	\$ 90

**2. POLICY ON TRAVEL**

Traveling expenses are billed based on actual charges. Time spent on traveling during normal office hours will be charged at 1/4 of the normal hourly rate.

The State of Michigan's traveling expense guidelines will be followed. They include:

- Hotel at actual cost up to \$65 per night.
- Mileage: \$ 0.305 per mile (does not include taxi or rental). Taxi and rental car at actual cost with receipt.
- Meals: Breakfast- \$7.25, Lunch- \$7.25, Dinner- \$16.50, Midnight meal (work after midnight)- \$ 7.25.

Payment Schedule and Payment Terms

The MDEQ will be invoiced each month based on time, material, and expenses incurred on the project. enfoTech's standard payment terms are 45 days net from the invoice date.

**PROJECT CONTACTS:**

The designated DIT Project Manager is:

Michael Beaulac  
 Department of Information Technology  
 Web Services Section  
 5th Floor South – Constitution Hall  
 525 West Allegan – P.O.Box 30273  
 Lansing, Michigan 48909  
 Phone Number 517-241-7808  
 Fax Number 517-373-4797  
 Email Address beaulacm@michigan.gov

The DIT Contract Liaison for this project is:

Patty Bogard  
 Department of Information Technology  
 6<sup>th</sup> Floor South – Constitution Hall  
 525 West Allegan  
 Lansing, Michigan 48909  
 Phone Number 517-335-4051  
 Fax Number 517-241-8379  
 Email Address bogardp@michigan.gov

The designated Agency Contact is:

Kristen Philip  
 Michigan Department of Environmental Quality  
 PO Box 30273  
 Lansing, Michigan 48909-7773  
 Phone Number (517) 241-1238  
 Email Address philipk@michigan.gov

**AGENCY RESPONSIBILITIES/ASSUMPTIONS:**

Michigan DEQ: Expansion of E2 to Include Drining Water Reporting

**RIGHT TO OWNERSHIP:**

With the exception of the E2 (the system, all modules, and documentation), all data, materials, documentation and other things developed by the contractor for this project shall belong exclusively to the State of Michigan. This includes, but is not limited to, source code and documentation. The State shall also own and retain intellectual property rights covering technology developed as part of the services described herein. The State understands that it cannot sell or give away this product to other sources outside the state of Michigan.

Since the E2 system is an enfoTech product being licensed to MDEQ, enfoTech maintains the ownership and owns the entire title of the E2 system.

**Budget**

Product/Task Description	Cost (USD)
<b>1. The e-DWR Project</b>	
<b>(1.A) System Development and Pilot Testing</b>	
- Expanding E2 to include e-DWR module	\$100,000
- Integrate E2 with Water Chem	\$27,600
- Integrate the E2 with WaterChem MOR database module	\$24,000
- Provide technical advice to MDEQ to expand WaterChem to manage MOR data	\$32,400
- Develop a transmission protocol	\$7,440
- Develop a draft facility package (application package)	\$5,040
- Develop business requirements for upto 5 additional e-DWR forms	\$11,040
- Customize e-DWR with additional forms	\$25,440
- Assist MDEQ to conduct e-DWR pilot	\$16,080
- Training	\$7,200
- Prepare a lesson learned report for the pilot phase	\$5,000
- Project coordination & traveling expenses	\$14,780
<b>(1.B) System Refinement and State-wide Implementation</b>	
- Finalize implementation guide (Protocol, App. Pack, Imp. Guide)	\$13,440
- Make changes on the E2 in accordance with final FRS	\$24,000
- Integration testing (E2 to Water Chem)	\$16,800
- Integration testing (E2 to WaterChem MOR module)	\$8,400
- Documentation (system doc., user guide, & online help)	\$20,000
- Installation	\$14,400
- Training	\$7,200
- Project coordination & traveling expenses	\$18,880
<b>Grand Total:</b>	<b>\$399,140</b>

Michigan DEQ: Expansion of NMS to Include Groundwater Permitting

 <b>DEPARTMENT OF INFORMATION TECHNOLOGY IT SERVICES STATEMENT OF WORK</b>	
<b>Project Title:</b> Expansion of NPDES Information Management System (NMS) to Support Groundwater Permit Compliance and Data Management	<b>Period of Coverage:</b> 7/1/2003 to 12/31/2003
<b>Requesting Department:</b> Water Division's Groundwater Section	<b>Date:</b> 6/25/2003
<b>Agency Project Manager:</b> Michael Beaulac	<b>Phone:</b> 517/241-1708
<b>DIT Contract Liaison:</b>	<b>Phone:</b> 517-335-4051

Michigan DEQ: Expansion of NMS to Include Groundwater Permitting

**Brief Description of Services to be provided:**  
 (Please attach a detailed Work Statement to this request)

**BACKGROUND:**

The Water Division's Groundwater Section of DEQ operate Groundwater Program issues groundwater permits and receives compliance monitoring reports that are required by Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). Based on the calendar year 2002, a total of 248 new applications were received. And out of the 248 applications received, 85 of them were covered under the highest potential risk discharger of Rule 2218.

The Water Division issues groundwater permits and receives compliance reporting information submitted quarterly from over 500 permitted groundwater discharger facilities. It is the goal of the Water division to issue timely authorization for discharges to groundwater. It is also the goal of the Water Division to make sure that facilities with groundwater authorizations remain in compliance with the groundwater standards.

Due to reductions in program resources (since the mid-1990's) and the recent reorganization, the number of groundwater staff has been greatly reduced. To keep the groundwater permits issued on time and to make sure that issued permits are in compliance, the groundwater staff need updated application to efficiently conduct the Groundwater Program. Instead of "re-inventing the wheel", the Groundwater Permitting can be incorporated into the existing NPDES Management System (NMS) used by the Surface Water Quality Division. The business of processing groundwater permits is very similar to the business of processing NPDES permits. Thus, the expansion of the NMS to support regulatory compliance function required by the Groundwater Permit Program is a logical and most cost effective choice. Nonetheless, some enhancements to the NMS are needed to make groundwater permitting in NMS a perfect fit. This would entail the addition of data elements specific to the groundwater permit program and as well as the modification/enhancements to the existing NMS functionalities.

**SCOPE OF WORK:**

This proposal is prepared for the Water Division's Groundwater Section of the Michigan Department of Environmental Quality (MDEQ) to retain enfoTech & Consulting, Inc. (enfoTech) to complete Expansion of the NMS to include Groundwater Permitting project. The scope of the project includes:

- Integration of Groundwater Permitting into NPDES Management System (NMS) for the State of Michigan

**PROJECT OBJECTIVE:**

The Expansion of NMS to include Groundwater Permitting Project will provide critical business support to the Michigan Groundwater Permitting Section to effectively administer the Groundwater Program mandated by USEPA and Michigan State Regulations. Information management needs from the Groundwater Program will be addressed in a systematic and comprehensive manner. Specifically, major groundwater enhancements requirements needed to be add to NMS are described below:

- The capability to store all regulated groundwater discharging facilities, groundwater permits, and compliance monitoring reports in the NMS database.
- The ability to issue groundwater permits using existing NMS functionalities with enhancements.
- The capability to store groundwater compliance reports and performs compliance evaluation with existing NMS functionalities.
- Save the Department's application development costs by re-utilizing of existing resources (NMS)
- Provide centralized document management for groundwater permits
- Streamline the compliance data review process by having the groundwater compliance report available through statewide NMS System.
- Improve the overall effectiveness of the State's wastewater discharge program with faster response data analyses, compliance assessment, enforcement support, permit review and re-issuance, and other water quality management decision-making.

Michigan DEQ: Expansion of NMS to Include Groundwater Permitting

<b>TO BE COMPLETED BY CONTRACTOR</b>	
(WRITTEN RESPONSE REQUIRED WITHIN 14 BUSINESS DAYS FROM RECEIPT OF AGENCY WORK STATEMENT)	
Response Approved : R Approved by Contractor Response Denied	Date: June 24, 2003
Reason for Denying:	
Signature of Contractor: 	

**TASKS:**

Technical support is required to assist with the following tasks for Expansion of the NMS System version 2.0 to include Groundwater Permitting:

1. Complete the NMS database enhancements to include addition data elements used by groundwater permits.
2. Complete the enhancements/modification to the existing NMS modules to support groundwater permitting
  - Permitting Wizard
  - Facility Module
  - Permit Module
  - DMR Module
3. Provide ten customized reports for use with groundwater permitting
4. Provide ad-hoc reporting capability (including knowledge transfer)
5. Provide technical assistance for data migration of groundwater permitting data into NMS database
6. Provide a completed Groundwater Permitting User Guide
7. Provide a completed Groundwater Permitting Administration Guide
8. Provide 4 site-visits with 2 day each for functional document development, system prototype, and review of Water Division's comments

**DELIVERABLES:**

The NMS version 2.0 will be expanded to include Groundwater Permitting. Existing NMS functionalities that support compliance and enforcement activities will also be available for the Groundwater Permits. Major categories of functional enhancements shall include:

1) **Permitting Wizard:**

- Need to add groundwater discharge permitting logic specific to each of rule defined below:
  - Rule 2210, (y) Site Exemption
  - Rule 2211, Notification
  - Rule 2213, Notification with Certification
  - Rule 2215, GP/COC
  - Rule 2216, Specific Discharges
  - Rule 2218, Discharge Permit
  - Pump and Haul Permit

This includes association of specific reference tasks to the Rule selected, auto default the permitting task due date based on the rule selected, and verification of existing data on the database.

- Need to incorporate groundwater "termination" logic to the Permitting Wizard

2) **Facility Module:**

- Station Maintenance Screen needs to be enhanced to include
  - Station and monitoring point naming logic for groundwater permit
  - Dynamic re-naming of the labels for station, monitoring point, and stage to groundwater permits

Michigan DEQ: Expansion of NMS to Include Groundwater Permitting

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- convention on station maintenance screen
  - Track Isolation Distance to well and property line
  - Track Station's Daily and Annual Authorized Flow
  - Track Wastewater's Discharge Method, Type, and Volume
  - Track Groundwater Monitoring Well as monitoring points
- Facility Maintenance Screen needs to be enhanced to include
  - Tracking of Wellhead Protection (Yes or No)
  - Total Discharge Volume by Facility (daily and annual)
  - Land Application Characteristics

3) **Permit Module:**

- Groundwater permit number generation logic
- Addition of Authorization Rule Type on Permit Maintenance Screen. Also for the authorization rule selected, track its sub-divisional details. (One permit is only subject to one Rule.
- Addition of Reporting Frequency (i.e. Quarterly) to differentiate the monthly DMR used by Surface Water Division
- Storage of Approved Documents (i.e. irrigation management plan, sampling plan, etc.) received from the permittee on database and linking it to the desired groundwater permit
- Tracking of supporting/required documents specified on the permit application
- Provide Permitting Fee Generation and Tracking Capability. Fee formulas are subject to change is based on rule authorization. Permitting fee will be system generated based on the formula provided by the Department.
- Provide assistance to Groundwater Permit Document Template Creation
- Track Land Application Rate data and related data not in the permit document
- Add "Rule" as a search criteria on the Permit Find Screen
- Provide the capability to print "pre-printed blank" Compliance Monitoring Form (with facility, monitoring point, parameters, and permit limits data pre-printed) in NMS
- Provide the capability to differentiate groundwater's sample type, sample frequency, and unit used on the Permit Limit Data Entry Screen

4) **DMR Module (Monitoring Data):**

- Enhance NMS Discharge Monitoring Report Module to include:
  - Data entry of groundwater Quarterly Compliance Monitoring Report
  - Cumulative Year to Date Flow
  - Track Groundwater Monitoring Well's:
    - Water level
    - Water Volume remove from casing

5) **Violation Module:**

- System generation of violations based on Compliance Monitoring Report received
- Tracking of "no report" violation for groundwater permits
- Tracking of "late report" violation for groundwater permits

6) **Report:**

- Creation of the following Customized Groundwater Reports:
  - CMR Report
  - Authorization Report
  - Project Tracking Report
  - Authorizations Expiring within X Days Report
  - Application Determination Report
  - Activity Report

Michigan DEQ: Expansion of NMS to Include Groundwater Permitting

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- Facility Activity
- A report to show: how many are required to report, how many have been received, how many are in violations, how many are in compliance.

**7) Data Migration:**

- Provide consultation services to migrate existing Groundwater Facilities into NMS database.
- Provide consultation services to migrate existing Groundwater Permits into NMS database.

**8) Documentation:**

- Develop end user documentation
- Develop system administration documentation

Deliverables will not be considered complete until the Agency Project Manager has formally accepted them.

**SKILL SET/EXPERIENCE REQUIRED:**

Skills and experience required to develop and maintain the NMS and E2 (e-DMR) systems include:

- For business requirements:
  - Regulatory knowledge for the State of Michigan's wastewater discharge permitting, monitoring, inspection, compliance, and enforcement requirements
  - Design, development, and implementation knowledge of the NMS system
- For system development and integration:
  - Technology expertise in .Net related Web applications, Web services, XML, Web services implementation using industry standard protocols, such as UDDI, WSDL, SOAP, XML and HTTP, object-based Graphic User Interface (like C#, ASP.NET, VB.NET, etc.) and middle-tier components (like COM+, MTS, Microsoft .NET Assembly, etc.),
  - Security implementation experience on wide spectrum of security options, including traditional multi-layered security and emerging end-to-end message level security such as XKMS, WS-Security, and Cost analysis, and CROMERR requirements
  - Relational database design, and SQL Server 2000 implementations.
  - Systems integration
- For implementation:
  - Training manual and workshop

**PROJECT CONTROL AND REPORTS:**

A monthly progress report must be submitted to the Agency Project Manager through the life of this project. This report may be submitted with the billing invoice. Each monthly progress report must contain the following:

1. **Hours:** Indicate the number of hours expended during the past two weeks, and the cumulative total to date for the project. Also state whether the remaining hours are sufficient to complete the project.
2. **Accomplishments:** Indicate what was worked on and what was completed during the current reporting period.
3. **Funds:** Indicate the amount of funds expended during the current reporting period, and the cumulative total to date for the project.

Michigan DEQ: Expansion of NMS to Include Groundwater Permitting

**SPECIFIC DEPARTMENT STANDARDS:**

Agency standards, if any, in addition to DIT standards.

**PAYMENT SCHEDULE:**

All invoices should reflect actual work completed by payment date, and must be approved by the Agency Project Director prior to payment. Payment will be made on based on milestone and deliverable, if the Agency Project Manager deems work is progressing satisfactorily. In the event it is necessary for contractual staff to travel for this project, the project manager must obtain prior approval. Travel charges will be reimbursed at current state-authorized rates as outlined by DMB guidelines and must be accompanied by actual receipts.

Rate Schedule for Consulting Services

This section provides a fee schedule for consulting services. All rates presented apply to services rendered during the terms of this contract through September 30, 2004, and are subject to adjustment, if applicable, upon contract renewal and mutual agreement.

**HOURLY RATES**

Charges for services provided will be in accordance with the following schedule:

<u>Classification</u>	<u>Hourly Rate (\$/hour)</u>
Principal Application Consultant	\$ 180
Principal System Consultant	\$ 180
Senior System QA/QC Consultant	\$ 160
Senior Application Consultant	\$ 150
Senior System Consultant	\$ 150
System QA/QC Consultant	\$ 130
Application Consultant	\$ 120
System Consultant	\$ 120
Business Support	\$ 90

**1. POLICY ON TRAVEL**

Traveling expenses are billed based on actual charges. Time spent on traveling during normal office hours will be charged at 1/4 of the normal hourly rate.

The State of Michigan’s traveling expense guidelines will be followed. They include:

- Hotel at actual cost up to \$65 per night.
- Mileage: \$ 0.295 per mile (does not include taxi or rental). Taxi and rental car at actual cost with receipt.
- Meals: Breakfast- \$7.00, Lunch- \$7.25, Dinner- \$16.50, Midnight meal (work after midnight)- \$ 7.25.

Payment Schedule and Payment Terms

The MDEQ will be invoiced each month based on time, material, and expenses incurred on the project. enfoTech’s standard payment terms are 30 days net from the invoice date.

Michigan DEQ: Expansion of NMS to Include Groundwater Permitting

**PROJECT CONTACTS:**

The designated DIT Project Manager is:  
 Michael Beaulac  
 Department of Information Technology  
 Web Services Section  
 5th Floor South – Constitution Hall  
 525 West Allegan – P.C.Box 30273  
 Lansing, Michigan 48909  
 Phone Number 517-241-7808  
 Fax Number 517-373-4797  
 Email Address beaulacm@michigan.gov

The DIT Contract Liaison for this project is:  
 Patty Bogard  
 Department of Information Technology  
 6<sup>th</sup> Floor South – Constitution Hall  
 525 West Allegan  
 Lansing, Michigan 48909  
 Phone Number 517-335-4051  
 Fax Number 517-241-8379  
 Email Address bogardp@michigan.gov

The designated Agency Contact is:  
 Jeffrey Jones  
 Department of Environmental Quality  
 Water Division  
 2<sup>nd</sup> Floor North – Constitution Hall  
 525 West Allegan – P.C.Box 30630  
 Lansing, Michigan 48909  
 Phone Number 517-335-4125  
 Fax Number 517-373-9958  
 Email Address jonesjj@michigan.gov

James R. Janiczek, Chief  
 Permits & Technical Support Unit of Groundwater Section  
 Department of Environmental Quality  
 Water Division  
 2<sup>nd</sup> Floor North – Constitution Hall  
 525 West Allegan – P.O.Box 30630  
 Lansing, Michigan 48909  
 Phone Number 517-373-7262  
 Fax Number  
 Email Address janiczekj@michigan.gov

**AGENCY RESPONSIBILITIES/ASSUMPTIONS:**

**RIGHT TO OWNERSHIP:**

All data, materials, documentation and other things developed by the contractor for this project shall belong exclusively to the State of Michigan. This includes, but is not limited to, source code *and documentation*. The State shall also own and retain intellectual property rights covering technology developed as part of the services described herein. The State understands that it cannot sell or give away this product to other sources outside the state of Michigan.

**PROJECT COST ESTIMATE:**

enfoTech offers competitive pricing for the services proposed for the project. An estimated project cost with breakdowns for each project task is provided below.

Product/Task Description	Cost	Total
<b>1. Itemized Project Tasks Cost Estimate</b>		
(A) Project Management		

Michigan DEQ: Expansion of NMS to Include Groundwater Permitting

1.) Project Management/ Project Report	\$9,000	
2.) Provide Project Work Schedule and Updates	\$3,600	
3.) Face-to-Face Project Meetings, Communication including staff hourly rates (2 staff, 4 trips 2-day/trip)	\$25,000	
Subtotal for (A) Project Management:		\$ 37,600
<b>(B) GW Permitting Design Specification - Functional Requirements, Screen, Database</b>		
1.) Develop a Detailed Functional Requirement Specification Document (Database, Screen, and Report Design)	\$6,000	
2.) Design and Implement NMS Database Changes for Groundwater Program	\$9,000	
Subtotal for (B) GW Permitting Design Specification:		\$ 15,000
<b>(C) Groundwater Permitting Development</b>		
<b>(C.1) Enhancements/Modifications to NMS' Permitting Wizard</b>		
1.) Addition of Groundwater Discharge Permitting Logic Specific to Each of the "Rule" Defined.	\$3,000	
2.) Addition of Groundwater "Termination" Logic	\$600	
<b>(C.2) Enhancements/Modifications to NMS' Facility Module</b>		
1.) Add New Station and Monitoring Point Naming Logic for Groundwater Station Type	\$1,500	
2.) Dynamic Re-Naming of the Labels for Station, Monitoring Point, and Stage Base on the Selected Groundwater Station Type	\$6,000	
3.) Make changes to the Station Maintenance Screen to accommodate additional data elements such as isolation distance to well and property line, annual and daily authorized flow.	\$18,000	
4.) Make changes to the Facility Maintenance Screen to accommodate additional data elements such as wellhead protection indication, discharge volume (daily and annual)	\$12,000	
5.) Track Station's Wastewater Discharge Method, Type, and Volume	\$4,500	
6.) Track Groundwater Monitoring Well as Monitoring Points	\$2,400	
7.) Track Land Application Characteristics on a New Tab in Facility Maintenance Screen	\$2,400	
<b>(C.3) Enhancements/Modifications to NMS' Permit Module</b>		
1.) Add Groundwater Permit Number Generation Logic	\$600	
2.) Addition of Authorization Rule Type on Permit Maintenance Screen. Also provide a function to track selected authorization rule's sub-divisional details.	\$6,000	
3.) Addition of Reporting Frequency (i.e. Quarterly) to differentiate the monthly DMR used by Surface Water Division	\$3,000	
4.) Add a New Tab on Permit Maintenance Screen to Store Approved Documents	\$2,400	
5.) Provide Tracking Capability for the Supporting/Required Documents Specified on the Permit Application	\$3,000	
6.) Provide Permitting Fee Generation and Tracking Capability	\$1,200	
7.) Provide assistance to Groundwater Permit Document Template Creation	\$3,000	
8.) Add "Rule" as a Search Criteria on the Permit Find Screen	\$2,400	
9.) Provide the Capability to Print "Pre-printed Blank" Compliance Monitoring Form (with Facility, Monitoring Point, Parameters, and Limits Data Pre-printed) in NMS	\$6,000	

Michigan DEQ: Expansion of NMS to Include Groundwater Permitting

10.) Provide the Capability to Differentiate Groundwater's Sample Type, Sample Frequency, and Unit Used on the Permit Limit Data Entry Screen	\$600	
<b>(C.4) Enhancements/Modifications to NMS' DMR Module (Monitoring Data)</b>		
1.) Provide Data Entry Capability for Groundwater's Quarterly Compliance Monitoring Report	\$12,000	
2.) Track Cumulative Year to Date Flow on Compliance Monitoring Report Data Entry Screen.	\$3,000	
3.) Track Groundwater Monitoring Well's Water Level and Water Volume Remove from Casing on Compliance Monitoring Report Data Entry Screen.	\$3,000	
<b>(C.5) Enhancements/Modifications to NMS' Violation Module</b>		
1.) System Generation of Violations Based on Compliance Monitoring Report Received	\$3,600	
2.) Tracking of "No Report" Violation for Groundwater Permits	\$3,600	
3.) Tracking of "Late Report" Violation for Groundwater Permits	\$3,600	
<b>(C.6) Reporting Requirement</b>		
1.) Provide Ten Customized Reports for Use with Groundwater Permitting	\$9,000	
2.) Provide Ad-Hoc Reporting Capability (Including Knowledge Transfer)	\$3,600	
Subtotal for (C) Groundwater Permitting Development:		\$ 120,000
<b>(D) Data Migration</b>		
Provide Consultation Services to Assist in the Data Migration of Existing Groundwater Facilities and Permit data into NMS Database	\$3,000	
Subtotal for (D) Data Migration:		\$ 3,000
<b>(E) Installation/Testing/Documentation</b>		
1.) System Testing	\$12,000	
2.) System Installation	\$1,200	
3.) Provide a Completed Groundwater Permitting User Guide	\$6,000	
4.) Provide a completed Groundwater Permitting Administration Guide	\$6,000	
Subtotal for (E) Installation/Testing/Documentation:		\$ 25,200
<b>(F) Annual Technical Supports</b>		
Annual Technical Supports from 1/1/2004 to 9/30/2004 (7% of Project Cost (not including expenses) and be pro-rated for 9 months)	\$13,897	
Subtotal for (F) Annual Technical Supports:		\$13,897
<b>(G) Requirements for On-going Maintenance</b>		
		\$ 32,204
<b>Grand Total for the Proposed Project:</b>		<b>\$ 246,901</b>

Form No. DMB 234 (Rev. 1/96)  
 AUTHORITY: Act 431 of 1984  
 COMPLETION: Required  
 PENALTY: Contract will not be executed unless form is filed

STATE OF MICHIGAN  
 DEPARTMENT OF MANAGEMENT AND BUDGET  
 ACQUISITION SERVICES  
 P.O. BOX 30026, LANSING, MI 48909  
 OR  
 530 W. ALLEGAN, LANSING, MI 48933

September 3, 2003

**CHANGE NOTICE NO. 5 (Revised)**  
**TO**  
**CONTRACT NO. 071B1001740**  
**between**  
**THE STATE OF MICHIGAN**  
**and**

NAME & ADDRESS OF VENDOR		TELEPHONE Tony Jeng <b>(609) 896-9777</b>
<b>Enfotech &amp; Consulting, Inc.</b> <b>11 Princess Road, Unit A</b> <b>Lawrenceville, NJ 08648</b>  <b>tony_jeng@enfotech.com</b>		VENDOR NUMBER/MAIL CODE
		BUYER (517) 241-1647 <b>Irene L. Pena</b>
Contract Administrator: Patty Bogard <b>Consulting Services for an Electronic Wastewater Discharge Reporting System –          Department of Environmental Quality</b>		
CONTRACT PERIOD: From: <b>August 27, 2001</b> To: <b>September 30, 2004</b>		
TERMS <b>N/A</b>	SHIPMENT <b>N/A</b>	
F.O.B. <b>N/A</b>	SHIPPED FROM <b>N/A</b>	
MINIMUM DELIVERY REQUIREMENTS <b>N/A</b>		

**NATURE OF CHANGE (S):**

**Contract Change Notice #5 should have read, "This contract is hereby EXTENDED through September 30, 2004 with two one-year renewal options."**

**TOTAL ESTIMATED CONTRACT VALUE REMAINS: \$2,631,187.00**

Form No. DMB 234 (Rev. 1/96)  
 AUTHORITY: Act 431 of 1984  
 COMPLETION: Required  
 PENALTY: Contract will not be executed unless form is filed

STATE OF MICHIGAN  
 DEPARTMENT OF MANAGEMENT AND BUDGET  
 ACQUISITION SERVICES  
 P.O. BOX 30026, LANSING, MI 48909  
 OR  
 530 W. ALLEGAN, LANSING, MI 48933

August 8, 2003

**CHANGE NOTICE NO. 5**  
**TO**  
**CONTRACT NO. 071B1001740**  
**between**  
**THE STATE OF MICHIGAN**  
**and**

NAME & ADDRESS OF VENDOR		TELEPHONE Tony Jeng <b>(609) 896-9777</b>
<b>Enfotech &amp; Consulting, Inc.</b> <b>11 Princess Road, Unit A</b> <b>Lawrenceville, NJ 08648</b>  <b>tony_jeng@enfotech.com</b>		VENDOR NUMBER/MAIL CODE
		BUYER (517) 241-1647 <b>Irene L. Pena</b>
Contract Administrator: Patty Bogard <b>Consulting Services for an Electronic Wastewater Discharge Reporting System –                  Department of Environmental Quality</b>		
CONTRACT PERIOD: From: <b>August 27, 2001</b> To: <b>September 30, 2004</b>		
TERMS <b>N/A</b>	SHIPMENT <b>N/A</b>	
F.O.B. <b>N/A</b>	SHIPPED FROM <b>N/A</b>	
MINIMUM DELIVERY REQUIREMENTS <b>N/A</b>		

**NATURE OF CHANGE (S):**

Effective August 8, 2003, this contract is hereby **EXTENDED** through September 30, 2004. Also, this contract is hereby **INCREASED** by \$982,995.00 to cover the attached statement of work that is being incorporated into this contract.

**AUTHORITY/REASON (S):**

Per vendor and agency agreement, and DMB/ACQUISITION SERVICES approval.

**INCREASE: \$982,995.00**

**TOTAL REVISED ESTIMATED CONTRACT VALUE: \$2,631,187.00**

**Proposal for  
Stormwater e-Permitting Module  
In E2 and Integration with NMS**

**Submitted to  
Michigan Department of Environmental Quality  
Lansing, Michigan**

Prepared by  
enfoTech & Consulting Inc.  
Lawrenceville, New Jersey 08648  
(609) 896-9777  
June 16, 2003



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## 1 Project Overview

This proposal is prepared for the Water Division (WD) of the Michigan Department of Environmental Quality (MDEQ) to retain enfoTech & Consulting Inc. (enfoTech) to perform expanding of the E2 System to add electronic permitting feature for the stormwater permitting.

The project scope includes:

- Implementation of an Internet-based electronic permitting to allow facilities to submit stormwater permit application on-line which include:
  - Application form
  - Payment data
- Integration of E2 and NMS for:
  - Acknowledge of application receipt and payment,
  - Process and tracking application, and
  - Publish decision on e-application at E2
  - Make approved permit available online for download

### 1.1 Business Objectives to be Achieved by the Project

The WD receives large volume of requests each year from facilities for discharge stormwater to Michigan waterways. The following steps describe the general procedures for each request processed by WD staff:

1. Facility submits a stormwater permit application on paper and application fee in check. Two types of applications are available:
  - a. Industrial stormwater
  - b. NOC stormwater
2. WD staff logins application data in NMS, sends check to finance department
3. WD staff evaluate application and made decision on the application
4. If application is approved, a discharge permit is issued
5. If application is denied, permit is not issued and refund is made to the applicant
6. Note in the NMS system to close the application case

The application is done in paper and the tracking is semi-automated with the use of the NMS. Many of permit requests are covered under a general "permit by rule" regulation and will require minimum staff evaluation time to approve the request as long as payment is made and application data is completed. Automating the permitting process will save valuable WQ resources which are premium commodity in current competitive work environment.

Completion of the e-Permitting project will provide the following benefits to WD:

- Save WD resources to manually track each application
- Provide the facility with a fast, easy, and efficient way of applying stormwater discharge permit. An valued- added service from Michigan government to the regulated community

Stormwater e-Permitting Module for E2

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- Reduce the Facility compliance costs by offering a streamlined permitting method, readily available computer tools, reduce wait time, and eliminate paper, and associate tracking/handling costs.
- Provide fast and easy payment validation via integration with existing Michigan electronic payment system
- Improve accuracy of compliance data by eliminating potential errors that otherwise would be introduced through manual and/or redundant data entry.
- Improve the overall effectiveness of the WD stormwater permit management program with faster responses for application processing, data analyses, compliance assessment, enforcement support, permit review and re-issuance, and other water quality management decision-making.

The deliverables of this project shall include the following:

1. Develop a Functional Requirement Document
2. Develop an e-Application XML schema to support the e-permitting process via Internet
3. Prototype the e-Permitting Module
  - User self-registration component
  - Web Entry Application forms (IU SW, and NOC SW permit)
  - Payment validation, Receipt confirmation, Facility notification, and Secured and serialization of the Application process and data at E2 for audit-trail and compliance purposes
  - Publish decision of each application and make permit on-line for approved application
4. Prototype NMS Modifications:
  - E2 to NMS data loading
  - NMS application review, decision, case tracking
  - Application decision data loading from NMS to E2
3. Finalize e-Permitting Module
4. Finalize NMS Modification
5. Provide Documentations
  - e-Application XML schema
  - e-Permitting Module
  - NMS modifications
6. Installation & Training that include:
  - Final installation of the e-Permitting module and NMS modifications
  - Training to WD staff
7. Provide continue support to the new functions as part of the Annual Technical Support Program





Stormwater e-Permitting Module for E2

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- Approval of application
- Rejection of application and reason
- Refund

### 3 Infrastructure Requirements for the e-Permitting Module

Michigan WD already implemented NMS 2.0 and the E2 systems. Both two systems are in production with sufficient infrastructure resources to support their operations.

This project is designed to build on the existing systems. Based on our preliminary analysis, we do not anticipate purchase of any new major infrastructure. However, we will work with MDIT to monitor system usage to assess infrastructure needs as the Project evolves.

### 4 Project Work Plans

#### 4.1 Project Methodology

EnfoTech recommends the evolutionary iterative (EI) method for system development. The EI model will provide several benefits to the project as follows:

- Definition of draft Functional Requirement Specifications (FRS)
- End users are actively involved in reviewing and commenting on the system during the development cycle (evolutional circular iteration)
- FRS is continuously updated to reflect design and implementation changes
- End products will have a high degree of match to user expectations

To facilitate the EI development model, enfoTech recommends some site visits during the critical project phases including the system specifications, prototyping discussion, system pre-final, installation, training, and support. Additional site visits might be required based on project needs. Frequency of site visits will be adjusted based on project tasks and the need for a face-to-face meeting. The goal is to complete the project on time, within budget, and to meet user requirements.

For the initial Functional Requirement Specifications development, upon the project kick-off, enfoTech proposes to send certain core members of the project team to conduct site visits and work closely with the WD and MDIT to develop the system specifications. Objectives of each FRS visit are described below:

1<sup>st</sup> visit – Project orientation, user interviews, review E2 prototype functions when applicable, and develop requirements for the e-Permitting Module and NMS changes. General system infrastructure requirements and support will also be discussed at the meeting.

2<sup>nd</sup> visit – Review the e-Permitting module prototype and NMS modifications with WD/MDIT. Discuss a draft implementation schedule and project administration procedures for the implementation phase. Expand the document to include a detailed implementation plan.



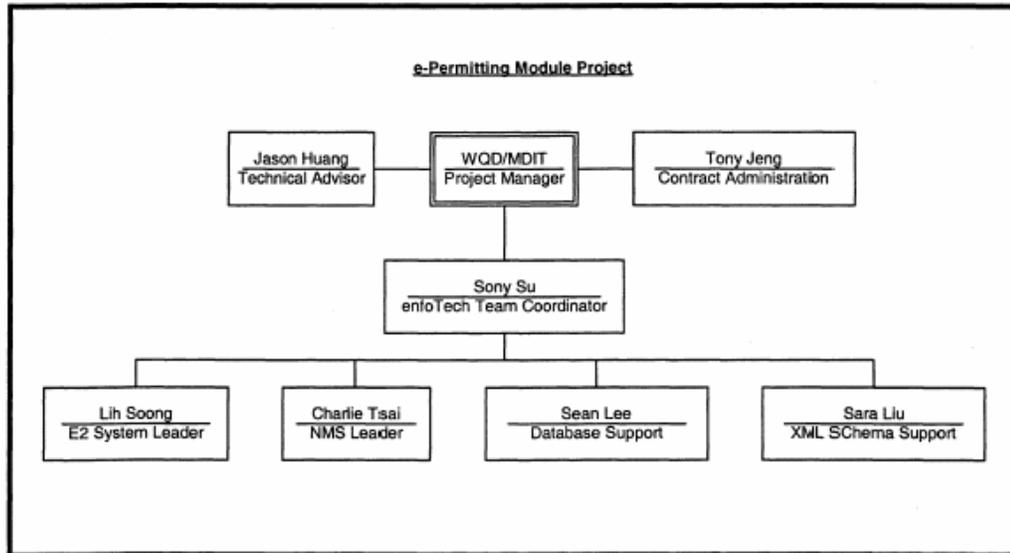


Stormwater e-Permitting Module for E2

2. Provide critical assistance in compliance management
3. Provide system functions to complement MDEQ's overall resource management

5.3 enfoTech Project Team (proposed)

Two enfoTech staff members, one senior application consultant and one senior system developer, will be assigned to share the project coordination responsibilities and work closely with the MDEQ. A preliminary proposed project team (major enfoTech personnel only) is illustrated in the following chart:



Mr. Tony Jeng will be responsible for contract administration for the entire project. He will work closely with the WD/MDIT project manager and Mr. Sony Su (enfoTech Project Manager) to ensure that the project is completed on time, within budget, and meet the users' expectations.

Mr. Jason Huang will act as technical advisor to guide the project team for successful system implementation and technology excellence.

Mr. Sony Su will serve as the enfoTech team project manager. He will be responsible for developing the project document outlining major milestones, work break down tasks, and schedule. He will also be tracking the project progress and provide status reports to the WD/MDIT project manager.

Educational backgrounds and project experiences for the key personnel planned for the project are provided below:

Stormwater e-Permitting Module for E2

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**Tony Jeng (Principal Application Consultant)**

**Education:** BS and MS in Chemical Engineering.

**Experience:** Mr. Jeng has over 20 years of regulatory and environmental engineering experience over a broad spectrum that includes wastewater treatment, drinking water standards, ground water monitoring, air emission calculation, dispersion modeling, hazardous waste treatment and disposal, maximum achievable control technology (MACT), SARA 313, and CERCLA programs. He has held various positions in different engineering capacities at state agencies, chemical manufacturing plants, and pharmaceutical production plants. Mr. Jeng is currently one of the principals of enfoTech & Consulting Inc.

**Primary responsibility:** Mr. Jeng will be responsible for the contract administration.

**Jason Huang (Principal System Consultant)**

**Education:** BA in Business and MS in Computer Science

**Experience:** Mr. Huang has over 15 years of experience in enterprise-wide system design, development, and implementation. Mr. Huang has delivered many corporate-wide missions critical application systems for major Future 100 companies to improve operations and save costs. He has held various key system development positions at companies such as Merck, Payne Weber, and Capital City/ABC to implement large-scale projects using SQL Server, ORACLE under Intranet and Internet environment. Mr. Huang is currently one of the principals at enfoTech & Consulting Inc and is providing the strategic direction for the Company in system research and product development.

**Primary responsibility:** Mr. Jason Huang will act as a technical advisor to guide the project team for successful system implementation and technology excellence.

**Sony Su (Senior Application Consultant)**

**Education:** BS in Chemical Engineering.

**Experience:** Mr. Su is current the account executive to all the Michigan IT projects. He is very familiar with the regulatory requirements for the NPDES program. He is a project coordinator for the NMS and E2 projects for the State of Michigan. He is intimately involved in design and implementation of the NMS version 2.0 and the Internet-based electronic E2 systems.

**Primary responsibility:** Mr. Su will coordinate communications from the WD/MDIT end-user side to enfoTech team for the development of the functional specifications, system prototyping, implementation, training, and system documentation.

**Charlie Tsai (Senior System Consultant)**

**Education:** BS in Computer Science and MS in Management of Information Systems

**Experience:** Mr. Tsai is a senior System Consultant who specializes in N-tiered object oriented system development. He is the NMS product leader, and has been involved in design and implementation of the NMS since beginning. Mr. Tsai has six years of extensive experience in system development and Oracle database.

**Primary responsibility:** Mr. Tsai will provide crucial support on system aspect for the NMS modifications. He will provide guidance on integration between E2 and the NMS system.

Stormwater e-Permitting Module for E2

**Lih Soong (Senior System Consultant)**

**Education:** BS in Physics and MS in Computer Science

**Experience:** Mr. Soong specializes in N-tiered object oriented system development. He is one of the core members of the E2 system development team. He has 4 years of system development and implementation experience in SQL Server database environment. Currently, Mr. Soong is the E2 product leader. .

**Primary Responsibility:** Mr. Soong will provide system support to the e-Permitting module development and integration with E2 and from E2 to NMS.

**Sean Lee (Senior System Consultant)**

**Education:** PhD in Biology and MS in Computer Science

**Experience:** Mr. Lee is a certified Oracle Consultant Professional and is expert in SQL Server database design and implementation. He is a key member to support NMS and E2 product development.

**Primary Responsibility:** Mr. Lee will provide database support to the e-Permitting module and NMS development and integration between E2 and NMS.

**Sara Liu (Application Consultant)**

**Education:** Doctor of Medical Science and MS in Computer Information Science

**Experience:** Ms. Liu has extensive consulting experience on XML schema development, XSLT style sheets, and web form development. Her strength has been on SQL script development, technical documentation, and presentation. She is also being certified as an XML developer. Ms. Liu is very familiar with the regulatory requirements for the NPDES program. She has participated in the development of E2 development and supports XML schema development and revisions. She is an active member various national workgroups including ECOS data standards, XML Design Rule Policy, and XML Registry.

**Primary Responsibility:** Mr. Ali will provide engineering support to the project.

**Cindy Yang (System Consultant)**

**Education:** BS and MS in Computer Science

**Experience:** Ms. Yang specializes in N-tiered object oriented system development. She is one of core members on the NMS project. She has 4 years of system development and implementation experience in SQL Server database environment.

**Primary Responsibility:** Ms. Yang will provide system support to the project

**6 Preliminary Project Schedule**

We estimate that the e-Permitting implementation will take about 4 to 6 months to complete. Assuming the project starts on 9/1/2003, we propose the following draft project schedule:

Project Component	Start Date	Completion Date
1. e-Permitting Module	9/1/2003	10/30/2003
2. NMS modifications and integration with e-Permitting	10/1/2003	12/31/2003
3. Installation, training, and go-live	1/1/2004	2/28/2004

Stormwater e-Permitting Module for E2

A detailed project work break down structure will be developed after a functional requirement specification document is developed with WD and MDIT.

**7 Project Cost Estimate**

**7.1 Cost Estimate**

EnfoTech offers competitive pricing for the services proposed for the project. An estimated project cost with breakdown for each project task is provided below.

Product/Task Description	Cost	Total for Task
<b>(A) Project Management/Facilitation/Expenses</b>		
(1) Project Management/Reports	\$ 8,280	
(2) WebEx Cost for Project Discussion	\$ 2,300	
(3) Face-to-Face Meetings (three 2-day/Mtg)	\$ 25,760	
(4) Other Direct Costs	\$ 2,484	\$ 38,824
<b>(B) Requirement Definition &amp; Schema Development</b>		
(1) Development & document Requirements	\$ 10,350	
(2) Develop an e-Application XML schema	\$ 10,350	
(3) Other Direct Costs	\$ 2,070	\$ 22,770
<b>(C) e-Application Module for E2</b>		
(1) Self Registration	\$ 24,150	
(2) e-Application Web Form(s)	\$ 22,770	
(3) E2 to NMS data loading	\$ 21,620	
(4) NMS modifications	\$ 14,720	
(5) NMS to E2 (application status)	\$ 14,720	
(6) Other Direct Costs	\$ 9,798	\$ 107,778
<b>(D) Installation/Testing/Documentation</b>		
(1) System Testing	\$ 20,700	
(2) System Documentation	\$ 15,870	
(3) System Installation	\$ 5,980	
(4) Training	\$ 12,880	
(5) Other Direct Costs	\$ 5,083	\$ 60,513
<b>(E) One-year Technical Support (prorated to fit into the master annual support contract)<sup>1</sup></b>	\$ 6,071	\$ 6,071
<b>Grand Total for the Proposed Project:</b>		<b>\$ 235,956</b>

<sup>1</sup> (Project cost – Expenses)/\$ 208,150\*(Annual Support Rate)/0.07\*(Prorated months)/5/12 = \$ 6,071

Stormwater e-Permitting Module for E2

7.2 Payment Schedule and Payment Terms

The MDEQ will be invoiced each month based on deliverables provided to WD/MDIT. EnfoTech's standard payment terms are 30 days net from the invoice date.

A draft payment schedule is proposed below:

Seq.	Deliverable	Date <sup>2</sup>	Payment
1	<ul style="list-style-type: none"> <li>• Project kickoff meeting</li> <li>• Project plan document</li> <li>• Functional Requirement Document</li> <li>• e-Permitting XML schema</li> </ul>	9/30/2003	\$ 37,770
2	<ul style="list-style-type: none"> <li>• E2 modification prototyping stormwater e-permitting                             <ul style="list-style-type: none"> <li>○ Self-registration</li> <li>○ Web-entry forms for industrial SW and NOC stormwater</li> <li>○ Payment validation</li> <li>○ Receipt confirmation</li> <li>○ Submission serialization</li> <li>○ One site visit for prototype demonstration</li> </ul> </li> </ul>	10/30/2003	\$ 45,000
3	<ul style="list-style-type: none"> <li>• NMS modification prototyping stormwater e-permitting                             <ul style="list-style-type: none"> <li>○ E2 to NMS data loading</li> <li>○ NMS modification</li> <li>○ e-permitting decision tracking in NMS</li> <li>○ NMS decision data to E2</li> <li>○ One site visit for prototype demonstration</li> </ul> </li> </ul>	11/30/2003	\$ 60,000
4	<ul style="list-style-type: none"> <li>• Pilot testing installation and testing e-permitting                             <ul style="list-style-type: none"> <li>○ Install E2 and NMS revisions for pilot testing</li> <li>○ Training</li> </ul> </li> </ul>	12/30/2003	\$ 30,000
5	<ul style="list-style-type: none"> <li>• Finalization of e-Permitting and NMS modifications                             <ul style="list-style-type: none"> <li>○ Final E2 and NMS installation</li> <li>○ System documentation</li> </ul> </li> </ul>	1/31/2004	\$ 30,000
6	<ul style="list-style-type: none"> <li>• System go-live</li> </ul>	2/28/2004	\$ 33,186

**Total:** \$ 235,956

<sup>2</sup> Preliminary date. Final dates will be discussed with WD and MDIT and be approved by the MDIT project manager.

Stormwater e-Permitting Module for E2

7.3 Rate Schedule for Consulting Services

This section provides a fee schedule for consulting services. All rates presented apply to services rendered during the calendar year 2003 and are subject to adjustment on January 1 of each subsequent year.

1. **HOURLY RATES**

Charges for services provided will be in accordance with the following schedule:

<u>Classification</u>	<u>Hourly Rate (\$/hour)</u>
Principal Application Consultant	\$ 180
Principal System Consultant	\$ 180
Senior System QA/QC Consultant	\$ 160
Senior Application Consultant	\$ 150
Senior System Consultant	\$ 150
System QA/QC Consultant	\$ 130
Application Consultant	\$ 120
System Consultant	\$ 120
Business Support	\$ 90

2. **POLICY ON TRAVEL**

Traveling expenses are billed based on actual charges. Time spent on traveling during normal office hours will be charged at 1/4 of the normal hourly rate.

**8 Product Ownership and Source Code Confidentiality**

(8.1) E2 Expansion for e-Permitting Module

E2 is an enfoTech product and is licensed to Michigan for use. In order to provide the most cost effective option to MDEQ and to capitalize previous e-DMR project success, the proposed e-Permitting module is designed to build on the E2 infrastructure and will use many basic E2 foundation classes. The design of e-permitting module could not function as a standalone module, and needs the E2 as the base in order to function. In addition, enfoTech has taken the approach to reduce the MDEQ project cost by including significant contribution of its own resource (about additional 135% of the proposed project cost) at no cost to MDEQ. Therefore, enfoTech proposes that the e-Permitting module be considered an integrated part of the E2 and be own by enfoTech.

MDEQ will have the right to access of the source codes for the purpose of system maintenance after execution of a Source Code Confidentiality Agreement with enfoTech.

(8.2) NMS Modifications for e-Permitting

NMS modifications source codes will be delivered to MDEQ upon request. MDEQ has the rights to make changes to the source codes. Change control procedures relating to source code changes under the Annual Technical Support Program will be discussed to arrive certain mutually agreeable terms.

Stormwater e-Permitting Module for E2

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# **Attachment A**

**Example Monthly Project Report (Draft)**

**and**

**Example Monthly Activity and Spending Report**

Stormwater e-Permitting Module for E2

Attachment A – Example Monthly Project Report (Draft)

Date

Project Manager  
 e-Permitting  
 Michigan Department of Information Technology  
 P.O. Box 30273  
 Lansing, MI 48909-7773

Subject: Project Activity Report for Period from 09/01/2003 to 9/30/2003 (MDEQ contract number: #####)

Dear Manager:

This letter provides a highlight of the e-Permitting project for the month of September 2003.

Activity Highlights for September, 2003

A summary description of the project progress for the reporting period is provided here.....  
 An example is shown in the following table:

Milestone or Task Description	Progress Report (Percent Completed)			
	FRS or GDS	Database Design	Screen Dev.	Report Dev.
1. e-Permitting module				
(1.a) XML transmission protocol	80 %	-	-	-
(1.b) Specification of enhancements				
(1.c) Development				
2. NMS Modifications				
(2.a) Functional Requirement Development	80 %	50 %	20 %	-
(2.b) Development	75 %	50 %	20 %	-

In addition, major project highlights and accomplishment will be identified below. For example:

- Project General:
  - MDEQ approved a Project Work Plan submitted by enfoTech.
  - EnfoTech conducted 2 site visits and worked with the project team to develop Functional Requirement Specifications (both new and revisions) for the e-Permitting project.

Stormwater e-Permitting Module for E2

Mr. Project Manager  
 e-Permitting Project Report  
 September, 2003 Report  
 Page 2 of 2

- **Functional Requirement Specifications:**
  - e-Permitting system
    - Developed draft requirement specifications
    - Completed a draft XML transmission protocol
  - NMS modifications
    - Developed draft system requirement specifications
    - Completed prototype screens
- **Database Design:**
  - Completed draft revision of the database design to support the e-permitting
  - Completed draft revision of the NMS database to support the e-permitting
- **Tasks Planned for October, 2003**  
 A summary description of the tasks planned for October, 2003 is provided here.....

**Spending for this reporting period:**

Description	Cost
1. Professional Service Fees	
2. Expenses (traveling and others)	
Total:	

Supporting document will be attached. Example of supporting documents are shown below:

**Invoices:**

One invoice (MDEQ-EPermit-001) is enclosed for your approval.

**e-Permitting Project Account Balance As of September 30, 2003:**

Description	Project Funding	Available Fund as of 09/01/2003	Invoice Amount This Period	Available Fund as of 09/30/2003	Percent Funding Available
e-Permitting Project					
Total:					

Sincerely,

Tony Jeng

TJ:jh  
 cc: File - MDEQ

**enfoTech**

**CONFIDENTIALITY AGREEMENT for E2 Source Codes and Related Documentation**

enfoTech & Consulting, Inc. (hereby referred as "enfoTech") is prepared to furnish the Michigan State Department of Information Technology (hereby referred as The "MDIT") with source codes and all related system documentation about the Electronic Environmental Reporting System (E2). As a condition to the receipt of such information, the MDIT agrees to enter this Agreement with enfoTech in quadruplicate.

**ARTICLE 1: Source Code Escrow**

- 1.a. **Purpose:** enfoTech is entering into this Agreement with the MDIT for the purposes of providing MDIT with the source codes to E2, all related system documentation, including all revisions thereto ("E2 Source Codes" or "Source Codes") and to protect confidential information that is proprietary to enfoTech.
- 1.b. **First Delivery of the Source Codes:** Upon the final payment of the remaining E2 licensing fees (XML utility license fee dated 2/12/2003, for \$ 200,000), enfoTech will deliver in a sealed package a complete, up-to-date, accurate copy of the E2 Source Codes to the MDIT.
- 1.c. **Delivery of additional Source Codes:** For each major release, enfoTech will deliver in a sealed package a complete, up-to-date, accurate copy of the E2 Source Codes to the MDIT.
- 1.d. **Source Codes Requirements:** The Source Codes will be labeled to denote the version or release and the currency date thereof and be delivered to the designated contact specified in this Agreement. The Source Codes shall be in machine-readable form on machine-readable storage medium suitable for long-term storage and compatible with the computer system then being used by the MDIT, which, when compiled, will produce the object version of the E2 software. Delivery of the Source Codes to The MDIT does not transfer any rights to The MDIT except for those set out in this Agreement.
- 1.e. **Safeguarding of the Source Codes:** The MDIT agrees to assign a representative to store and safeguard the Source Codes in a secured and locked place. enfoTech shall establish and notify the MDIT of reasonable parameters for the temperature and the humidity of and the dust and magnetic influences in the environment of the storage area required for the Source Codes. enfoTech represents, warrants and covenants to the MDIT (and acknowledges that the MDIT is relying thereon) that (i) the Source Codes (including all intellectual property rights therein) are lawfully owned by enfoTech and are proprietary to enfoTech; (ii) the Source Codes are complete and otherwise accurately reflect the version of the E2 software then in use by the MDIT; (iii) the Source Codes do not and will not infringe or otherwise violate the rights of any third party; (iv) the Source Codes do not contain any virus, designed to disable, erase, destroy, damage, alter or render meaningless, useless or ineffective or otherwise harm the E2 software. The MDIT agrees to take all reasonable precautions to prevent third parties from using the Source Codes and will not release the Source Codes to any party without a written authorization by enfoTech.  
  
 Within 15 days of receiving the Source Codes from enfoTech, The MDIT will provide enfoTech with the name, phone, fax, and address of the representative who will perform the safeguarding duty of the Source Codes. The MDIT also agrees to notify enfoTech, within 15 days, when the representative has been changed.
- 1.f. **Prohibition to Copy, Reproduce, and Distribution:** The MDIT is prohibited to copy, reproduce, re-manufacture, make available to any third party, or distribute the Source Codes for purposes other than those set out herein without an explicit written authorization from enfoTech.
- 1.g. **Condition to Access the Source Codes by The MDIT:** enfoTech grants a perpetual, non-exclusive, non-transferable license to the MDIT to access and use the Source Codes for the purpose of system support and maintenance under the following conditions.
  - If enfoTech has filed a voluntary petition in bankruptcy or insolvency, or been ordered by a court of competent jurisdiction to cease operations

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**enfoTech**

- If a proceeding in bankruptcy, receivership, liquidation or insolvency has been commenced, in any jurisdiction, against enfoTech, or its property, and the same has not dismissed within thirty (30) days
- If enfoTech has ceased to offer or provide support and maintenance services for the E2 software while the MDIT has maintained an active technical support program with enfoTech and paid required fees in full
- If enfoTech provides a written authorization to the MDIT to have access to and use the Source Codes

1.h. Use of the Source Codes Provided under section (1.g.) of this article The MDIT hereby agrees that the Source Codes will be used solely for the purpose of system support and maintenance to the E2 system installed at the MDIT. The source code and related documentation are only for MDIT's internal use and shall not be released to any third parties.

**ARTICLE 2: General**

- 2.a. Ownership of the Source Codes: enfoTech represents, warrants and covenants to The MDIT (and acknowledges that The MDIT is relying thereon) that it owns the entire title of the E2 system and that the Source Codes are parts of the E2 system and are properties of enfoTech and that the ownership is protected under the copyright laws and international treaties. Unauthorized reproduction or distribution of the Source Codes, or any part of it, may result in severe civil and criminal penalties under the law.
- 2.b. Proprietary and Confidentiality Nature of the Information: enfoTech represents, warrants and covenants to the MDIT (and acknowledges that The MDIT is relying thereon) that the Source Codes are proprietary and confidential to enfoTech. Unauthorized disclosure of the Source Codes and enfoTech proprietary information contained therein to any party will result in substantial business damages and financial loss to enfoTech.
- 2.c. Legal Proceedings to Disclose the Material. If the MDIT or any of its representatives is requested or required (by oral question or request for information or documents in legal proceedings, interrogatories, subpoena, civil investigative demand or similar process) to disclose any of the E2 proprietary technologies and documentation referred to herein, it is agreed that the MDIT will provide enfoTech with prompt notice of any such request or requirement so enfoTech may seek an appropriate protective order, or waive The MDIT compliance with the provisions of this Agreement.
- 2.d. Return of the Material. Where enfoTech terminates this Agreement by reason of: (1) The MDIT discontinuing without reasonable cause a technical support program with enfoTech, or (2) The MDIT being in breach of any of its obligation under this Agreement and The MDIT not curing such breach within 30 days to the reasonable satisfaction of enfoTech, or (3) where The MDIT no longer requires such Material and, upon notice to enfoTech of such, enfoTech so requests, The MDIT will promptly return all E2 proprietary technologies and documentation ("Material") referred to herein to enfoTech, without retaining a copy thereof, unless required by law. In such event, at enfoTech's request, all other copies of any Material will be destroyed or, if not possible, held by The MDIT subject to this Agreement, which shall continue for this purpose. Despite the return or destruction of any Material, The MDIT will continue to be bound by its obligations of confidentiality and other obligations hereunder.
- 2.e. Notices. All notices shall be given to the designated contacts specified in this Agreement. It shall be the responsibility of the parties to notify each other in the event of a change of address. All documents and communications may be delivered by First Class mail.
- 2.f. Severability. Each provision of this Agreement shall be interpreted in such a manner as to be effective and valid under applicable law. If any provision of this Agreement is found to be invalid, the parties agree that, unless it materially affects the entire intent of this Agreement,

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- 2.b. Proprietary and Confidentiality Nature of the Information: enfoTech represents, warrants and covenants to the MDIT (and acknowledges that The MDIT is relying thereon) that the Source Codes are proprietary and confidential to enfoTech. Unauthorized disclosure of the Source Codes and enfoTech proprietary information contained therein to any party will result in substantial business damages and financial loss to enfoTech.
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**enfoTech**

such provision shall affect neither the validity of this Agreement nor the remaining provisions. The provision in question shall be deemed to be replaced with a valid provision most closely reflecting the intent of the original provision.

- 2.g. Successors. This Agreement shall be binding upon and shall inure to the benefit of the successors and permitted assigns of the parties.
- 2.h. Governing Law. This Agreement and performance hereunder shall be governed by and construed in accordance with the laws of the laws of New Jersey therein, without regard to any provisions thereof governing conflicts of laws. The parties submit to the exclusive jurisdiction of the courts of the New Jersey.
- 3.i. Miscellaneous. (a) It is further understood and agreed that no failure or delay in exercising any right, power or privilege hereunder shall operate as a waiver thereof, and no single or partial exercise thereof shall preclude any other or further exercise thereof or the exercise of any right, power or privilege hereunder. (b) It is further understood and agreed that money damages would not be a sufficient remedy for any breach of this Agreement and enfoTech shall be entitled to specific performance and injunctive or other equitable relief as a remedy for such breach without the necessity for posting a bond. Such remedy shall be in addition to all other remedies available at law or equity to enfoTech. (c) enfoTech shall have the right to collect from The MDIT its reasonable expenses incurred in enforcing this Agreement including a reasonable attorney's fees.

**AGREED AND SIGNED BY:**

Michigan Department of Information Technology

By: *Debra D'Amico, CPPB*  
 Name: *Irene Pena*  
 Title: *Buyer*  
 Date: *6/17/03*

enfoTech & Consulting Inc.

By: *Tony C. Jeng*  
 Name: *Tony C. Jeng*  
 Title: *Senior Vice President*  
 Date: *6/27/2003*

**DESIGNATED CONTACTS:**

Michigan Department of Information Technology

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Telephone: \_\_\_\_\_  
 Facsimile : \_\_\_\_\_

enfoTech & Consulting Inc.

Name: *Tony C. Jeng*  
 Address: *11 Princess Road*  
*Unit A*  
*Lawrenceville, NJ 08648*  
 Telephone: *(609) 896-9777 Ext. 107*  
 Facsimile : *(609) 896-2555*

Form No. DMB 234 (Rev. 1/96)  
 AUTHORITY: Act 431 of 1984  
 COMPLETION: Required  
 PENALTY: Contract will not be executed unless form is filed

STATE OF MICHIGAN  
 DEPARTMENT OF MANAGEMENT AND BUDGET  
 ACQUISITION SERVICES  
 P.O. BOX 30026, LANSING, MI 48909  
 OR  
 530 W. ALLEGAN, LANSING, MI 48933

June 18, 2003

CHANGE NOTICE NO. 4  
 TO  
 CONTRACT NO. 071B1001740  
 between  
 THE STATE OF MICHIGAN  
 and

NAME & ADDRESS OF VENDOR  <b>Enfotech &amp; Consulting, Inc.</b> <b>11 Princess Road, Unit A</b> <b>Lawrenceville, NJ 08648</b>	TELEPHONE Tony Jeng <b>(609) 896-9777</b>
	VENDOR NUMBER/MAIL CODE
	BUYER (517) 241-1647 <b>Irene L. Pena</b>
Contract Administrator: Patty Bogard <b>Consulting Services for an Electronic Wastewater Discharge Reporting System –                  Department of Environmental Quality</b>	
CONTRACT PERIOD: From: <b>August 27, 2001</b> To: <b>September 30, 2003</b>	
TERMS N/A	SHIPMENT N/A
F.O.B. N/A	SHIPPED FROM N/A
MINIMUM DELIVERY REQUIREMENTS N/A	

**NATURE OF CHANGE (S):**

Effective 6/3/03, this contract is hereby INCREASED \$200,000.00 to cover software licensing.

In addition, the attached confidentiality agreement is hereby incorporated into this contract for the E2 source code and related documentation.

**AUTHORITY/REASON (S):**

Per agency request (Patty Bogard) on 6/12/03 and vendor (Tony Jeng) on 6/12/03.

**INCREASE: \$200,000.00**

**TOTAL REVISED ESTIMATED CONTRACT VALUE: \$1,648,192.00**

**enfoTech**

**CONFIDENTIALITY AGREEMENT for E2 Source Codes and Related Documentation**

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- 2.f. Severability. Each provision of this Agreement shall be interpreted in such a manner as to be effective and valid under applicable law. If any provision of this Agreement is found to be invalid, the parties agree that, unless it materially affects the entire intent of this Agreement,

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such provision shall affect neither the validity of this Agreement nor the remaining provisions. The provision in question shall be deemed to be replaced with a valid provision most closely reflecting the intent of the original provision.

- 2.g. Successors. This Agreement shall be binding upon and shall inure to the benefit of the successors and permitted assigns of the parties.
- 2.h. Governing Law. This Agreement and performance hereunder shall be governed by and construed in accordance with the laws of the laws of New Jersey therein, without regard to any provisions thereof governing conflicts of laws. The parties submit to the exclusive jurisdiction of the courts of the New Jersey.
- 3.i. Miscellaneous. (a) It is further understood and agreed that no failure or delay in exercising any right, power or privilege hereunder shall operate as a waiver thereof, and no single or partial exercise thereof shall preclude any other or further exercise thereof or the exercise of any right, power or privilege hereunder. (b) It is further understood and agreed that money damages would not be a sufficient remedy for any breach of this Agreement and enfoTech shall be entitled to specific performance and injunctive or other equitable relief as a remedy for such breach without the necessity for posting a bond. Such remedy shall be in addition to all other remedies available at law or equity to enfoTech. (c) enfoTech shall have the right to collect from The MDIT its reasonable expenses incurred in enforcing this Agreement including a reasonable attorney's fees.

**AGREED AND SIGNED BY:**

Michigan Department of Information Technology  
 By: Irene Pena, CPPB  
 Name: Irene Pena  
 Title: Buyer  
 Date: 6/17/03

enfoTech & Consulting Inc.  
 By: \_\_\_\_\_  
 Name: Tony C. Jeng  
 Title: Senior Vice President  
 Date: \_\_\_\_\_

**DESIGNATED CONTACTS:**

Michigan Department of Information Technology  
 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Telephone: \_\_\_\_\_  
 Facsimile : \_\_\_\_\_

enfoTech & Consulting Inc.  
 Name: Tony C. Jeng  
 Address: 11 Princess Road  
Unit A  
Lawrenceville, NJ 08648  
 Telephone: (609) 896-9777 Ext. 107  
 Facsimile : (609) 896-2555

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**CONFIDENTIALITY AGREEMENT for E2 Source Codes and Related Documentation**

enfoTech & Consulting, Inc. (hereby referred as "enfoTech") is prepared to furnish the Michigan State Department of Information Technology (hereby referred as The "MDIT") with source codes and all related system documentation about the Electronic Environmental Reporting System (E2). As a condition to the receipt of such information, the MDIT agrees to enter this Agreement with enfoTech in quadruplicate.

**ARTICLE 1: Source Code Escrow**

- 1.a. **Purpose:** enfoTech is entering into this Agreement with the MDIT for the purposes of providing MDIT with the source codes to E2, all related system documentation, including all revisions thereto ("E2 Source Codes" or "Source Codes") and to protect confidential information that is proprietary to enfoTech.
- 1.b. **First Delivery of the Source Codes:** Upon the final payment of the remaining E2 licensing fees (XML utility license fee dated 2/12/2003, for \$ 200,000), enfoTech will deliver in a sealed package a complete, up-to-date, accurate copy of the E2 Source Codes to the MDIT.
- 1.c. **Delivery of additional Source Codes:** For each major release, enfoTech will deliver in a sealed package a complete, up-to-date, accurate copy of the E2 Source Codes to the MDIT.
- 1.d. **Source Codes Requirements:** The Source Codes will be labeled to denote the version or release and the currency date thereof and be delivered to the designated contact specified in this Agreement. The Source Codes shall be in machine-readable form on machine-readable storage medium suitable for long-term storage and compatible with the computer system then being used by the MDIT, which, when compiled, will produce the object version of the E2 software. Delivery of the Source Codes to The MDIT does not transfer any rights to The MDIT except for those set out in this Agreement.
- 1.e. **Safeguarding of the Source Codes:** The MDIT agrees to assign a representative to store and safeguard the Source Codes in a secured and locked place. enfoTech shall establish and notify the MDIT of reasonable parameters for the temperature and the humidity of and the dust and magnetic influences in the environment of the storage area required for the Source Codes. enfoTech represents, warrants and covenants to the MDIT (and acknowledges that the MDIT is relying thereon) that (i) the Source Codes (including all intellectual property rights therein) are lawfully owned by enfoTech and are proprietary to enfoTech; (ii) the Source Codes are complete and otherwise accurately reflect the version of the E2 software then in use by the MDIT; (iii) the Source Codes do not and will not infringe or otherwise violate the rights of any third party; (iv) the Source Codes do not contain any virus, designed to disable, erase, destroy, damage, alter or render meaningless, useless or ineffective or otherwise harm the E2 software. The MDIT agrees to take all reasonable precautions to prevent third parties from using the Source Codes and will not release the Source Codes to any party without a written authorization by enfoTech.

Within 15 days of receiving the Source Codes from enfoTech, The MDIT will provide enfoTech with the name, phone, fax, and address of the representative who will perform the safeguarding duty of the Source Codes. The MDIT also agrees to notify enfoTech, within 15 days, when the representative has been changed.

- 1.f. **Prohibition to Copy, Reproduce, and Distribution:** The MDIT is prohibited to copy, reproduce, re-manufacture, make available to any third party, or distribute the Source Codes for purposes other than those set out herein without an explicit written authorization from enfoTech.
- 1.g. **Condition to Access the Source Codes by The MDIT:** enfoTech grants a perpetual, non-exclusive, non-transferable license to the MDIT to access and use the Source Codes for the purpose of system support and maintenance under the following conditions.
  - If enfoTech has filed a voluntary petition in bankruptcy or insolvency, or been ordered by a court of competent jurisdiction to cease operations

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- If a proceeding in bankruptcy, receivership, liquidation or insolvency has been commenced, in any jurisdiction, against enfoTech, or its property, and the same has not dismissed within thirty (30) days
  - If enfoTech has ceased to offer or provide support and maintenance services for the E2 software while the MDIT has maintained an active technical support program with enfoTech and paid required fees in full
  - If enfoTech provides a written authorization to the MDIT to have access to and use the Source Codes
- 1.h. Use of the Source Codes Provided under section (1.g.) of this article The MDIT hereby agrees that the Source Codes will be used solely for the purpose of system support and maintenance to the E2 system installed at the MDIT. The source code and related documentation are only for MDIT's internal use and shall not be released to any third parties.

**ARTICLE 2: General**

- 2.a. Ownership of the Source Codes: enfoTech represents, warrants and covenants to The MDIT (and acknowledges that The MDIT is relying thereon) that it owns the entire title of the E2 system and that the Source Codes are parts of the E2 system and are properties of enfoTech and that the ownership is protected under the copyright laws and international treaties. Unauthorized reproduction or distribution of the Source Codes, or any part of it, may result in severe civil and criminal penalties under the law.
- 2.b. Proprietary and Confidentiality Nature of the Information: enfoTech represents, warrants and covenants to the MDIT (and acknowledges that The MDIT is relying thereon) that the Source Codes are proprietary and confidential to enfoTech. Unauthorized disclosure of the Source Codes and enfoTech proprietary information contained therein to any party will result in substantial business damages and financial loss to enfoTech.
- 2.c. Legal Proceedings to Disclose the Material. If the MDIT or any of its representatives is requested or required (by oral question or request for information or documents in legal proceedings, interrogatories, subpoena, civil investigative demand or similar process) to disclose any of the E2 proprietary technologies and documentation referred to herein, it is agreed that the MDIT will provide enfoTech with prompt notice of any such request or requirement so enfoTech may seek an appropriate protective order, or waive The MDIT compliance with the provisions of this Agreement.
- 2.d. Return of the Material. Where enfoTech terminates this Agreement by reason of: (1) The MDIT discontinuing without reasonable cause a technical support program with enfoTech, or (2) The MDIT being in breach of any of its obligation under this Agreement and The MDIT not curing such breach within 30 days to the reasonable satisfaction of enfoTech, or (3) where The MDIT no longer requires such Material and, upon notice to enfoTech of such, enfoTech so requests, The MDIT will promptly return all E2 proprietary technologies and documentation ("Material") referred to herein to enfoTech, without retaining a copy thereof, unless required by law. In such event, at enfoTech's request, all other copies of any Material will be destroyed or, if not possible, held by The MDIT subject to this Agreement, which shall continue for this purpose. Despite the return or destruction of any Material, The MDIT will continue to be bound by its obligations of confidentiality and other obligations hereunder.
- 2.e. Notices. All notices shall be given to the designated contacts specified in this Agreement. It shall be the responsibility of the parties to notify each other in the event of a change of address. All documents and communications may be delivered by First Class mail.
- 2.f. Severability. Each provision of this Agreement shall be interpreted in such a manner as to be effective and valid under applicable law. If any provision of this Agreement is found to be invalid, the parties agree that, unless it materially affects the entire intent of this Agreement,

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such provision shall affect neither the validity of this Agreement nor the remaining provisions. The provision in question shall be deemed to be replaced with a valid provision most closely reflecting the intent of the original provision.

- 2.g. **Successors.** This Agreement shall be binding upon and shall inure to the benefit of the successors and permitted assigns of the parties.
- 2.h. **Governing Law.** This Agreement and performance hereunder shall be governed by and construed in accordance with the laws of the laws of New Jersey therein, without regard to any provisions thereof governing conflicts of laws. The parties submit to the exclusive jurisdiction of the courts of the New Jersey.
- 3.i. **Miscellaneous.** (a) It is further understood and agreed that no failure or delay in exercising any right, power or privilege hereunder shall operate as a waiver thereof, and no single or partial exercise thereof shall preclude any other or further exercise thereof or the exercise of any right, power or privilege hereunder. (b) It is further understood and agreed that money damages would not be a sufficient remedy for any breach of this Agreement and enfoTech shall be entitled to specific performance and injunctive or other equitable relief as a remedy for such breach without the necessity for posting a bond. Such remedy shall be in addition to all other remedies available at law or equity to enfoTech. (c) enfoTech shall have the right to collect from The MDIT its reasonable expenses incurred in enforcing this Agreement including a reasonable attorney's fees.

**AGREED AND SIGNED BY:**

Michigan Department of Information Technology

By: *Irene Pena, CPPB*  
 Name: *Irene Pena*  
 Title: *Buyer*  
 Date: *6/17/03*

enfoTech & Consulting Inc.

By: \_\_\_\_\_  
 Name: *Tony C. Jeng*  
 Title: *Senior Vice President*  
 Date: \_\_\_\_\_

**DESIGNATED CONTACTS:**

Michigan Department of Information Technology

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Telephone: \_\_\_\_\_  
 Facsimile : \_\_\_\_\_

enfoTech & Consulting Inc.

Name: *Tony C. Jeng*  
 Address: *11 Princess Road*  
*Unit A*  
*Lawrenceville, NJ 08648*  
 Telephone: *(609) 896-9777 Ext. 107*  
 Facsimile : *(609) 896-2555*

Form No. DMB 234 (Rev. 1/96)  
 AUTHORITY: Act 431 of 1984  
 COMPLETION: Required  
 PENALTY: Contract will not be executed unless form is filed

STATE OF MICHIGAN  
 DEPARTMENT OF MANAGEMENT AND BUDGET  
 ACQUISITION SERVICES  
 P.O. BOX 30026, LANSING, MI 48909  
 OR  
 530 W. ALLEGAN, LANSING, MI 48933

January 29, 2003

CHANGE NOTICE NO. 3  
 TO  
 CONTRACT NO. 071B1001740  
 between  
 THE STATE OF MICHIGAN  
 and

NAME & ADDRESS OF VENDOR  <b>Enfotech &amp; Consulting, Inc.</b> <b>11 Princess Road, Unit A</b> <b>Lawrenceville, NJ 08648</b>	TELEPHONE Tony Jeng <b>(609) 896-9777</b>
	VENDOR NUMBER/MAIL CODE
	BUYER (517) 241-1647 <b>Irene L. Pena</b>
Contract Administrator: Patty Bogard <b>Consulting Services for an Electronic Wastewater Discharge Reporting System –                  Department of Environmental Quality</b>	
CONTRACT PERIOD: From: <b>August 27, 2001</b> To: <b>September 30, 2003</b>	
TERMS N/A	SHIPMENT N/A
F.O.B. N/A	SHIPPED FROM N/A
MINIMUM DELIVERY REQUIREMENTS N/A	

**NATURE OF CHANGE (S):**

Effective immediately, this contract has been EXTENDED for nine (9) months. The new contract ending date is September 30, 2003 and the Contract Administrator in now Patty Bogard. No additional dollars are needed.

**TOTAL ESTIMATED CONTRACT VALUE REMAINS: \$1,448,192.00**

Form No. DMB 234 (Rev. 1/96)  
 AUTHORITY: Act 431 of 1984  
 COMPLETION: Required  
 PENALTY: Contract will not be executed unless form is filed

STATE OF MICHIGAN  
 DEPARTMENT OF MANAGEMENT AND BUDGET  
 ACQUISITION SERVICES  
 P.O. BOX 30026, LANSING, MI 48909  
 OR  
 530 W. ALLEGAN, LANSING, MI 48933

July 11, 2002

CHANGE NOTICE NO. 2  
 TO  
 CONTRACT NO. 071B1001740  
 between  
 THE STATE OF MICHIGAN  
 and

NAME & ADDRESS OF VENDOR  <b>Enfotech &amp; Consulting, Inc.</b> <b>11 Princess Road, Unit A</b> <b>Lawrenceville, NJ 08648</b>	TELEPHONE Tony Jeng <b>(609) 896-9777</b>
	VENDOR NUMBER/MAIL CODE
	BUYER (517) 241-1647 <b>Irene L. Pena</b>
Contract Administrator: Michael Beaulac <b>Consulting Services for an Electronic Wastewater Discharge Reporting System –                  Department of Environmental Quality</b>	
CONTRACT PERIOD: From: <b>August 27, 2001</b> To: <b>December 31, 2002</b>	
TERMS <p style="text-align: center;">N/A</p>	SHIPMENT <p style="text-align: center;">N/A</p>
F.O.B. <p style="text-align: center;">N/A</p>	SHIPPED FROM <p style="text-align: center;">N/A</p>
MINIMUM DELIVERY REQUIREMENTS <p style="text-align: center;">N/A</p>	

**NATURE OF CHANGE (S):**

Effective 7/10/02 this contract is hereby **INCREASED** by \$99,150.00.

**AUTHORITY/REASON:**

Per agency's request from Angela Williams dated 7/1/02 and DMB/OOP approval and in accordance with the modification clause of contract.

**INCREASE: \$99,150.00**

**TOTAL REVISED ESTIMATED CONTRACT VALUE: \$1,448,192.00**