Project Tracking No.:

Return on Investment (ROI) Program Funding Application

This template was built using the ITE ROI Submission Intranet application. **FINAL AUDIT REQUIRED:** The Enterprise Quality Assurance Office of the Information Technology Enterprise is required to perform post implementation outcome audits for all Pooled Technology funded projects and may perform audits on other projects.

This is an IOWAccess Revolving Fund Request.

Amount of funding requested: Currently: \$35,000

Anticipated total this Phase: \$35,000

Section I: Proposal

Date:	June 29,2007
Agency Name:	Department of Natural Resources
Project Name:	Hazardous Substance Incident Database Conversion
Agency Manager:	Adam Broughton
Agency Manager Phone Number / E- Mail:	515-725-0386 Adam.Broughton@dnr.state.ia.us
Executive Sponsor (Agency Director or Designee):	
IOWAccess Project Process Phase:	☐ Scope Analysis ☐ Design ☐ Implementation

A. Project Summary: Describe the nature and use of the proposed project, including what is to be accomplished, how it will be accomplished, and what the costs and benefits will be.

This application will be used to perform the following:

- 1. Report hazardous spills
- Gather additional information concerning the spills from both the DNR and the responsible parties
- 3. Provide reports to the public
- 4. Migrate data from 3 databases into one
- 5. Connect to the four state HERE information exchange portal
- 6. Connect to and utilize the DNR One Stop database

The reporting and updating of information will be accomplished using a new website written in .NET language.

The databases will be migrated from Access and Paradox to a SQL database.

Reports will be made available through the website. The reports will not be canned reports in that the user may select the dates and type of report. Reports may be saved as an Excel spreadsheet.

B. Strategic Plan: How does the proposed project fit into the strategic plan of the requesting agency?

DNR is proactively providing easier access to information to the public, regulated parties, and local emergency response officials. The project will also provide the tools to make it easier for DNR personnel to perform their duties more efficiently, with better accuracy and quicker, better response to the public.

C. Current Technology: Provide a summary of the technology used by the current system. How does the proposed project impact the agency's technological direction? Are programming elements consistent with a Service Oriented Architecture (SOA) approach? Are programming elements consistent with existing enterprise standards?

The current system uses an Access Database. The current website contains a page on the DNR website which includes reports in pdf format and links to forms and information currently generated monthly by DNR personnel. The reports are not customized for individual public use. The current system allows DNR employees to input the preliminary spill report, but no follow-up information or reports. However, due to Access database constraints, each field office is limited to using the application one hour of each day. Only one user at a time may access the application.

The proposed project will conform to the new direction being implemented by DNR. The application will submit information to the DNR One Stop application as well as obtain information such as location latitude and longitude from the One Stop application. The programming elements are very consistent with the SOA approach and are consistent with enterprise standards. The application will also submit information to the four state Heartland Emergency Response Exchange (HERE) project which is designed to provide local and state emergency planners with cross border hazard information. The revision will allow the application to use the new DNR website look and feel.

D. Statutory or Other Requirements

Is this project or expenditure necessary for compliance with a Federal law, rule, or order?

YES (If "Yes", cite the specific Federal law, rule or order, with a short explanation of how this project is impacted by it.)

Explanation: Emergency Planning and Community Right-To-Know Act (EPCRA) Section 304, 40 CFR 355 requires facilities to provide emergency notification and a written follow-up notice to the State Emergency Response Commission (SERC) if there is a release into the environment of a hazardous substance that is equal to or exceeds the minimum reportable quantity set in the regulations. The DNR is tasked with receiving these notifications on behalf of the SERC.

Is this project or expenditure required by state law, rule or order?

YES (If "YES", cite the specific state law, rule or order, with a short explanation of how this project is impacted by it.)

Explanation: lowa Administrative Code (567 IAC 131.2) requires any person manufacturing, storing, handling, transporting or disposing of a hazardous substance to notify this department of the occurrence of a hazardous condition. In Chapter 131 "Hazardous Condition" means any situation involving the actual, imminent or probable spillage, leakage, or release of a hazardous substance onto the land, into a water of the state or into the atmosphere which, because of quantity, strength and toxicity of the hazardous substance, its mobility in the environment and its persistence, creates an immediate or potential danger to the public health or safety or to the environment.

Does this project or expenditure meet a health, safety or security requirement? YES (If "YES", explain.)

Explanation:

Responsible parties are required to report all spills that create an immediate or potential danger to the public health or safety or to the environment as outlined in Iowa Code. DNR personnel may investigate any spill which is considered hazardous to the environment and/or people and animals. Information collected by this application will also support the efforts of the Iowa Department of Public Health's Hazardous Substances Emergency Events Surveillance program.

Is this project or expenditure necessary for compliance with an enterprise technology standard?

 \square YES (If "YES", cite the specific standard.)

Explanation:

[This section to be scored by application evaluator.] <u>Evaluation</u> (15 Points Maximum)

If the answer to these criteria is "no," the point value is zero (0). Depending upon how directly a qualifying project or expenditure may relate to a particular requirement (federal mandate, state mandate, health-safety-security issue, or compliance with an enterprise technology standard), or satisfies more than one requirement (e.g. it is mandated by state and federal law and fulfills a health and safety mandate), 1-15 points awarded.

E. Impact on Iowa's Citizens

1. **Project Participants** - List the project participants (i.e. single agency, multiple agencies, State government enterprise, citizens, associations, or businesses, other levels of government, etc.) and provide commentary concerning the nature of participant involvement. Be sure to specify who and how many **direct** users the system will impact. Also specify whether the system will be of use to other interested parties: who they may be, how many people are estimated, and how they will use the system.

Project Participants – DNR personnel, citizens, associations, businesses, and other levels of government.

The new application will affect DNR personnel, government agencies, citizens and other interested groups.

DNR personnel and the person(s) responsible for a hazardous spill will be affected directly as the application will enhance the methods used to input and gather data.

At this time, DNR personnel accept calls reporting a hazardous spill. The information is entered into the system. The current system allows DNR personnel access during a one hour period at specified periods of time during the day. This results in the employee writing down the information and entering the information at a later time. The new application will provide DNR personnel with the ability to enter the information as it is being relayed.

The responsible party must then submit a written follow-up report. DNR personnel may also submit additional information from spill investigations. These pieces of information are currently not tracked electronically. The new application will allow both DNR and the responsible party the ability to enter data online as well as submit supporting documentation such as documents and pictures on line. Data which has been previously entered will populate the corresponding fields in the additional reports thus saving everyone time and effort.

The public and all interested parties will be allowed to select the time period for each available report thus providing more timely and complete information. This will be very helpful to government agencies, special interest groups, developers and real estate agencies.

2. Service Improvements - Summarize the extent to which the project or expenditure improves service to Iowa citizens or within State government. Included would be such items as improving the quality of life, reducing the government hassle factor, providing enhanced services, improving work processes, etc.

The new application will greatly enhance the interaction the citizen has with the Department of Natural Resources.

DNR personnel may input data at any time rather than having to wait for their designated hour. This will greatly reduce the amount of time spent manually gathering information to input into the application. This application will allow the input of follow-up reports and

information not previously tracked in the current application. This will also enable personnel to quickly perform a search at any time of the day.

This application will enable the citizen to obtain timely reports, provide documentation in a timelier manner and provide a much easier means to input data and update spill information. This will also enable the citizens to obtain the reports they need for the specific time period that is needed without needing to contact DNR. These reports will be available at any time. The addition of information not previous tracked electronically will improve the completeness of information provided to the public via the internet.

3. Citizen Impact – Summarize how the project leads to a more informed citizenry, facilitates accountability, and encourages participatory democracy. If this is an extension of another project, what has been the adoption rate of Iowa's citizens or government employees with the preceding project?

Citizens will have the opportunity to obtain timely, complete reports. The application will allow the public to view data graphically through its interface with the DNR's One-Stop geographical information system. Public officials and emergency planners will also be able to view and share this information through the applications connection to the four-state Heartland Emergency Response Exchange system. This will also enable DNR to provide statistics to the citizens and other government agencies based on more reliable data.

4. Public Health and/or Safety – Explain requirements or impact on the health and safety of the public.

Public will have the opportunity to obtain timely, complete reports on spills in their area, impact or potential impact to the environment in their area, and the actions taken to prevent or mitigate that impact. The public will also have easy access to information that will aid in choosing where to live or develop property. The information is also used by Iowa Department of Public Health's Hazardous Substances Emergency Events Surveillance program to track incidents that impact public health.

[This section to be scored by application evaluator.] Evaluation (15 Points Maximum)

- Minimally directly impacts Iowa citizens (0-5 points).
- Moderately directly impacts Iowa citizens (6-10 points).
- Significantly directly impacts Iowa citizens (11-15 points).

[This section to be scored by application evaluator.] Evaluation (10 Points Maximum)

- Minimally improves customer service (0-3 points).
- Moderately improves customer service (4-6 points).
- Significantly improves customer service (7-10 points).

F. Process Reengineering

Provide a pre-project or pre-expenditure (before implementation) description of the impacted system or process. Be sure to include the procedures used to administer the impacted system or process and how citizens interact with the current system.

Response:

The current process is as follows:

- 1. Responsible party, local public official, or members of the public call DNR to report a spill of hazardous material.
- 2. DNR personnel physically write down the information if it is not within their one hour time frame to have access to the application.
- 3. DNR inputs the data during their time frame
- 4. The citizen downloads the 30 day follow up form, completes it and mails it to DNR.
- 5. DNR conducts a follow-up investigation and may generate follow-up information in hardcopy format.
- 6. DNR personnel place database reports in pdf format on the web site.

Provide a post-project or post-expenditure (after implementation) description of the impacted system or process. Be sure to include the procedures used to administer the impacted system or process and how citizens will interact with the proposed system. In particular, note if the project or expenditure makes use of information technology in reengineering traditional government processes.

Response:

- 1. The responsible party, local public official, or member of public reports a hazardous spill to DNR
- 2. DNR personnel will enter the information into the application during the call and through the interface with the One-Stop program confirm locational information.
- 3. The application will obtain the latitude and longitude from the DNR One Stop application
- 4. The citizen may enter the 30 day report from the web site. They will also be able to upload any documentation and pictures.
- 5. DNR personnel will enter any follow-up information through the web application. They may also upload documentation and pictures.

- 4. Hazardous Substance Incident DB Conversion ROI.doc
 - 6. With the web portal citizens, DNR personnel, public officials, and other state agencies can easily view data and obtain reports with the information most of interest to them.
 - 7. DNR personnel will have access to the follow-up and 30 day information via the website. This will enable them to provide timely information to the citizens as well as management.

[This section to be scored by application evaluator.] Evaluation (10 Points Maximum)

- <u>Minimal</u> use of information technology to reengineer government processes (0-3 points).
- <u>Moderate</u> use of information technology to reengineer government processes (4-6 points).
- <u>Significant</u> use of information technology to reengineer government processes (7-10).

G. Timeline

Provide a projected timeline for this project. Include such items as **start date**, planning, database design, coding, implementation, testing, conversion, parallel installation, and date of final release. Also include the parties responsible for each item.

Scope Analysis Phase (ITE) - March 8 through July 15

Design Phase (ITE) - July 16 through October 31

Implementation Phase (ITE) - November 1 - January 31, 2008

[This section to be scored by application evaluator.] <u>Evaluation</u> (10 Points Maximum)

- The timeline contains several problem areas (0-3 points).
- The timeline seems reasonable with few problem areas (4-6 points).

• The timeline seems reasonable with no problem areas (7-10).

H. Funding Requirements

On a fiscal year basis, enter the estimated cost by funding source: Be sure to include developmental costs and ongoing costs, such as those for hosting the site, maintenance, upgrades.

	FY06		FY07		FY08	
	Cost(\$)	% Total Cost	Cost(\$)	% Total Cost	Cost(\$)	% Total Cost
State General Fund	\$0	0%	\$0	0%	\$0	0%
Pooled Tech. Fund /IOWAccess Fund	\$0	0%	\$0	0%	\$35000	100%
Federal Funds	\$0	0%	\$0	0%	\$0	0%
Local Gov. Funds	\$0	0%	\$0	0%	\$0	0%
Grant or Private Funds	\$0	0%	\$0	0%	\$0	0%
Other Funds (Specify)	\$0	0%	\$0	0%	\$0	0%
Total Project Cost	\$0	0%	\$0	0%	\$35000	100%
Non-Pooled Tech. Total	\$0	0%	\$0	0%	\$0	0%

[This section to be scored by application evaluator.] <u>Evaluation</u> (10 Points Maximum)

- The funding request contains questionable items (0-3 points).
- The funding request seems reasonable with few questionable items (4-6 points).



• The funding request seems reasonable with no problem areas (7-10).

I. Scope

Explanation:

Is this project a continuation of a previously begun project?

YES (If "YES", explain.)

Explanation: This project will re-engineer and combine two old applications and an archived data set so that it better meets the needs of the public, is more flexible, and uses current technology. This project will use and adapt existing code from another IOWAccess project and will interface with two other applications currently under development.

[This section to be scored by application evaluator.] Evaluation (10 Points Maximum)

- This is the first year of a multi-year project / expenditure or project / expenditure duration is one year (0-5 points)
- The project / expenditure is of a multi-year nature and each annual component produces a definable and stand-alone outcome, result or product (2-8 points).



 This is beyond the first year of a multi-year project / expenditure (6-10 points)

The last part of this criteria involves rating the extent to which a project or expenditure is at an advanced stage of implementation and termination of the project / expenditure would waste previously invested resources.

J. Source of Funds

On a fiscal year basis, how much of the total project cost (\$ amount and %) would be <u>absorbed</u> by your agency from non-Pooled Technology and/or IOWAccess funds? If desired, provide additional comment / response below.

Response: \$35,000 & 100%

During the first year all costs, with the exception of personnel and hosting costs, will be paid out of IOWAccess funds. All costs after the initial development and implementation will be absorbed by IDNR.

[This section to be scored by application evaluator.] Evaluation (5 Points Maximum)

- 0% (0 points)
- 1%-12% (1 point)
- 13%-25% (2 points)
- 25%-38% (3 points)
- 39%-50% (4 points)
- Over 50% (5 points)

Section II: Financial Analysis

A. Project Budget Table

It is necessary to <u>estimate and assign</u> a useful life figure to <u>each</u> cost identified in the project budget. Useful life is the amount of time that project related equipment, products, or services are utilized before they are updated or replaced. In general, the useful life of hardware is three (3) years and the useful life of software is four (4) years. Depending upon the nature of the expense, the useful life for other project

costs will vary between one (1) and four (4) years. On an exception basis, the useful life of individual project elements or the project as a whole may exceed four (4) years. Additionally, the ROI calculation must include all new annual ongoing costs that are project related.

The Total Annual Prorated Cost (State Share) will be calculated based on the following equation:

$$\left[\left(\frac{\textit{Budget Amount}}{\textit{Useful Life}}\right) \times \% \; \textit{State Share}\right] + \left(Annual \; \textit{Ongoing Cost} \; \times \; \% \; \textit{State Share}\right) = Annual \; \textit{Prorated Cost}$$

Budget Line Items	Budget Amount (1st Year Cost)	Useful Life (Years)	% State Share	Annual Ongoing Cost (After 1st Year)	% State Share	Annual Prorated Cost
Agency Staff	10,400	1	0			0
Software	35,000	4	100			8,750
Hardware						
Training						
Facilities						
Professional Services						
ITD Services						
Supplies, Maint, etc.						
Other						
Totals	45,400					8,750

B. Spending plan

Explain how the funds will be allocated.

The funds will be used to complete the Design Phase of the project.

C. Tangible and/or Intangible Benefits

Respond to the following and transfer data to the ROI Financial Worksheet as necessary:

1. Annual Pre-Project Cost - This section should be completed only if state government operations costs are expected to be reduced as a result of project implementation. Quantify actual state government direct and indirect costs (personnel, support, equipment, etc.) associated with the activity, system or process prior to project implementation.

Describe/Quantify Annual Pre-Project Cost:

- 4. Hazardous Substance Incident DB Conversion ROI.doc
 - Personnel (FTE) Costs Personnel time will be reduced by not recording initial incident information on hard copy forms then reentering the same information into the current database.

average number of incidents per year x time to record x FTE salary and benefits /2080 hrs per year = cost

 $860 \times 0.25 \times $52,000/2080 = $5,375$

 Personnel (FTE) Costs - Personnel time will be reduced by not manually generating reports for publication on the current web page for public use.

time to generate reports and post x months x FTE salary and benefits / 2080 hrs per year = cost

4 hrs x 12 months x \$68,000 / 2080 = \$1,584

Quantify Annual Pre-Project Cost:

see notes above

	State Total
FTE Cost(salary plus benefits):	\$6,959
Support Cost (i.e. office supplies, telephone, pagers, travel, etc.):	\$0.00
Other Cost (expense items other than FTEs & support costs, i.e. indirect costs if applicable, etc.):	\$0.00
Total Annual Pre-Project Cost:	\$6,959

2. **Annual Post-Project Cost** - This section should be completed only if state government operations costs are expected to be reduced as a result of project implementation. **Quantify actual state government direct and indirect costs** (personnel, support, equipment, etc.) associated with the activity, system or process <u>after project implementation</u>.

Describe Annual Post-Project Cost:

Costs descried above will be reduced or eliminated by personnel no longer performing the tasks.

Quantify Annual Post-Project Cost:

see note above

	State Total
FTE Cost(salary plus benefits):	\$0.00
Support Cost (i.e. office supplies, telephone, pagers, travel, etc.):	\$0.00
Other Cost (expense items other than FTEs & support costs, i.e. indirect costs if applicable, etc.):	\$0.00
Total Annual Post-Project Cost:	\$0.00

3. Citizen Benefit - Quantify the estimated annual value of the project to Iowa citizens. This includes the "hard cost" value of avoiding expenses ("hidden taxes") related to conducting business with State government. These expenses may be of a personal or business nature. They could be related to transportation, the time expended on the manual processing of governmental paperwork such as licenses or applications, taking time off work, mailing, or other similar expenses. As a "rule of thumb," use a value of \$10 per hour for citizen time.

Describe savings justification:

Citizens will benefit in several ways. Ease of access, improved search accuracy, and cost savings. Currently the department charges for file searches and copying of documents. There is also a cost for shipping of copied documents for those choosing not to travel to Des Moines. If citizens choose to travel to Des Moines they would incur transportation, time and expense costs.

Costs: Records Center personnel search fee - \$20/hr

Copying Charges (standard 8 ½ x 11) - \$0.40/page (average incident file size is 10 pages based on random sampling)

Postage/Shipping – varies with size of package and method chosen

Transaction Savings (Record Center Costs)*				
Number of annual record center spill file transactions:	120			
Hours saved/transaction:	1			
Number of Citizens affected: see above				
Cost of Search Time:	20.00			
Total Transaction Savings: copying costs	4.00			
Other Savings (Describe)				
Total Savings:	\$2,880.00			

* Costs saved by citizens can not be easily tabulated as queries of the records are made by citizens from all over the country.

4. Opportunity Value/Risk or Loss Avoidance - Quantify the estimated annual <u>non-operations</u> benefit to State government. This could include such items as qualifying for additional matching funds, avoiding the loss of matching funds, avoiding program penalties/sanctions or interest charges, avoiding risks to health/security/safety, avoiding the consequences of not complying with State or Federal laws, providing enhanced services, avoiding the consequences of not complying with enterprise technology standards, etc.

Response: This application will allow multiple personnel to enter incident data into the system real time. This application will also allow field personnel to view all incident data from any web accessible location allowing better incident management. The application will also allow through its linkage to One-Stop the ability to verify and refine locational information. The application will allow other state and local agencies easier and quicker access to more complete data than with the previous application.

5. **Benefits Not Readily Quantifiable** - List and summarize the overall non-quantifiable benefits (i.e., IT innovation, unique system application, utilization of new technology, hidden taxes, improving the quality of life, reducing the government hassle factor, meeting a strategic goal, etc.).

Response: This application will allow citizens the opportunity to be more aware of the condition of the environment where they live and help them select a safe place to raise their family through easy access to spill data in a searchable format. Through the linkages to the One-Stop program citizens can view the information graphically and DNR personnel can confirm locations quickly and accurately. Through linkages with the Heartland Emergency Response Exchange program local officials and emergency planners can utilize information not only in Iowa but the four other participating states for planning and grant proposals.

ROI Financial Worksheet	
A. Total Annual Pre-Project cost (State Share from Section II C1):	6959
B. Total Annual Post-Project cost (State Share from Section II C2):	0
State Government Benefit (= A-B):	6959
Annual Benefit Summary:	
State Government Benefit:	6959
Citizen Benefit*:	2880
Opportunity Value or Risk/Loss Avoidance Benefit:	0
C. Total Annual Project Benefit:	9839
D. Annual Prorated Cost (From Budget Table):	8750
Benefit / Cost Ratio: (C/D) =	1.12
Return On Investment (ROI): ((C-D) / Requested Project Funds) * 100 =	3.11

^{*} See note on Citizen Benefit C. 3. above and Benefits Not Readily Quantifiable C.5. above

4. Hazardous Substance Incident DB Conversion ROI.doc

[This section to be scored by application evaluator.] Evaluation (15 Points Maximum)

- The financial analysis contains several questionable entries and provides minimal financial benefit to citizens (0-5 points).
- The financial analysis seems reasonable with few questionable entries and provides a moderate financial benefit to citizens (6-10 points).



• The financial analysis seems reasonable with no problem areas and provides maximum financial benefit to citizens (11-15).

Appendix A. Auditable Outcome Measures

For each of the following categories, <u>list the auditable metrics for success</u> after implementation and <u>identify how they will be measured.</u>

1. Improved customer service

Metric: 80% of visitors respond positively to a survey.

How: Visitors to the web site will have the opportunity to respond to a survey and provide feed back to the DNR through a link on the web page.

2. Citizen impact

Metric: Visits to the new web page will be 10% higher then visits to the previous web site and requests made to the records center for spill data will be reduced by 10%.

How: Hits to the new web page will be compared to hits to the old site in the same time period the previous year and requests made to the record center will be tracked.

3. Cost Savings

Metric: Reduction in personnel time spent recording initial spill data will be reduced by 25% leading to a reduction in cost.

How: Tracking of personnel time expenditures verses number of spills recorded.

4. Project reengineering

Metric: New application will improve access and quality of data while shortening the time personnel spending recording, updating, and verifying data.

How: Visitors to the web site will have the opportunity to respond to a survey and provide feed back to the DNR through a link on the web page.

5. Source of funds (Budget %)

see #3 above

6. Tangible/Intangible benefits

Metric: Citizens will benefit from improved accessibility, graphical displays and improved data quality and quantity. Responsible parties will benefit from improved accessibility, incident information verification and ease of submitting required reports. Personnel will benefit from improved accessibility, ease of tracking incidents and report submissions, responsible party tracking to investigate problem sites, and increased locational accuracy.

How: These benefits will be tracked and recorded through citizen feedback and surveys, feed back from responsible parties, and feed back from DNR personnel.