

**PLEASE NOTE THAT ANNUAL REPORTING FOR SECTIONS B AND D
CORRELATE TO EACH NOTICE OF INTENT BMP AS CHECKED ON ORIGINAL
PERMIT AS FOLLOWS:**

A. Public Education and Outreach

- A.1 Distributed Paper Material**
- A.2 Speaking Engagement**
- A.3 Public Service Announcement**
- A.4 Community Event**
- A.5 Classroom Education Material**
- A.6 Other Public Education**

B. Public Participation/Involvement

- B.1 Public Panel**
- B.2 Educational Volunteer**
- B.3 Stakeholder Meeting**
- B.4 Public Hearing**
- B.5 Volunteer Monitoring**
- B.6 Program Coordination**
- B.7 Other Public Involvement**

C. Illicit Discharge Detection/Elimination

- C.1 Storm Sewer Map Preparation**
- C.2 Regulatory Control Program**
- C.3 Detection/Elimination Prior. Plan**
- C.4 Illicit Discharge Tracing Proced.**
- C.5 Illicit Source Removal Procedures**
- C.6 Program Evaluation/Assessment**
- C.7 Visual Dry Weather Screening**
- C.8 Pollutant Field Testing**
- C.9 Public Notification**
- C.10 Other Illicit Discharge Controls**

D. Construction Site Runoff Control

- D.1 Regulatory Control Program**
- D.2 Erosion & Sed. Control BMPs**
- D.3 Other Waste Control Program**
- D.4 Site Plan Review Procedures**
- D.5 Public Inform. Handling Proc.**
- D.6 Site Inspection/Enforce. Proc.**
- D.7 Other Constr. Site Runoff Controls**

E. Post-Construction Runoff Control

- E.1 Community Control Strategy**
- E.2 Regulatory Control Program**
- E.3 Long Term O&M Procedures**
- E.4 Pre-Const Review of BMP Designs**
- E.5 Site Inspect. During Construction**
- E.6 Post-Construction Inspections**
- E.7 Other Post-Const Runoff Controls**

F. Pollution Prevention/Good Housekeep.

- F.1 Employee Training Program**
- F.2 Inspection/Maintenance Program**
- F.3 Muni Operations Storm. Control**
- F.4 Muni Operations Waste Disposal**
- F.5 Flood Mgmt/Assess Guidelines**
- F.6 Other Muni Operations Controls**

SECTION B: Attach the status of compliance with permit conditions, an assessment of the appropriateness of your identified Best Management Practices and progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP, and your identified measurable goals for each of the minimum control measures.

A. Public Education and Outreach

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- **A.5 Classroom Education Material**

MEASUREABLE GOALS, INCLUDING FREQUENCIES:

The County of DuPage has developed a general education and outreach program on storm water and water quality that will target several large groups of stakeholders within the watershed such as: youths, technical audiences, landowners, and recreational users. This program has the goal of: increasing the awareness and appreciation of a watershed community that will result in a lasting change in behavior; show how the protection and enhancement of the quality, quantity, and availability of surface and groundwater resources will preserve and enhance the health of existing aquatic and riparian environments as well as the quality of life; and establish the necessary resources to support the development and distribution of educational materials throughout the County.

YEAR 6 MILESTONE (SUMMARY):

Complete and address any milestones from Year's (1-5) from first Notice of Intent of the original ILR40 NPDES Phase II permit that have not been implemented for this minimum control measure (see NOI as separate attachment).

COMPLETED TASKS IN YEAR 6:

A1. Distributed Paper Material (including electronic material)

- ✓ DuPage County Recycling Guide was made available to the general public visiting the County in the Economic Development and Planning Department Kiosk area. The resource-recycling guide lists a variety of options and programs available to help residents manage hazardous and other types of solid waste in an environmentally safe and responsible way.

- ✓ DuPage County Wetlands and Streams and Maintenance and Management of Naturalized Areas A Homeowners Guide brochures were made available to County visitors in the Kiosk area of our Department.
- ✓ In addition, educational flyers produced by The Conservation Foundation and funded through DuPage County Community Foundation describing potential hazards of invasive species, benefits of native landscaping and shade gardens, backyards for wildlife, butterfly gardens, rain it's a natural resource, got downspouts build a rain garden, dump no waste drains to river were made available in the waiting area by the Kiosk.
- ✓ DuPage County Clean Air Counts newsletter and Low Volatile Organic Compound (VOC) Paint flyers have also been distributed in the Kiosk. Advertisements for DuPage County websites on water quality, as well as waste, recycling and energy conservation topics were also distributed inside the county building.

The Conservation Foundation Activities
(funded in part by DuPage County Stormwater Management)

Watershed Website

TCF is in the process of updating the DuPage Rivers website (www.dupagerivers.org) that hosts the recently updated Upper DuPage Watershed Plan. This plan is meant to encompass all work/programs in the watershed, including but not limited to DuPage County, DuPage River Salt Creek Workgroup and SCARCE. The website is broken into six major areas: General Watershed Info/DuPage River Coalition Section, Stormwater Section, Citizens/Volunteer Section, In the Water Section, On the Land Section and an Understanding Section.

TCF is posting additional information to the website weekly from the Watershed Plan Update as well as information from watershed activities throughout the community. The website will continue to have a strong tie to DuPage County programs as they are key pieces of the implementation of the watershed plan, particularly the BMP manual, floodplain ordinance and the illicit discharge program. Staff plans to develop and distribute fliers regarding the website update before the end of the contract.

DRSCW NPDES Activities

Public education and outreach on storm water impacts

Distributed paper material: During 2008 the Workgroup distributed a variety of education material related to stormwater management in the service area. A number of reports, bulletins and newsletters related to stormwater pollutants, their sources and possible solutions were both distributed and made available on the Workgroup website (www.drscw.org).

- Chloride Fact Sheets: Four chloride fact sheets were developed, each aimed at one of the following audiences: mayors and managers, public works staff, commercial operators, and homeowners. The fact sheets provided information on the chloride usage, its environmental affects and practical means for reducing its use.
- Deicing Alternative Products Summary: CDM, a consultant employed by the Workgroup, developed a summary of alternative deicing products. The document provides a summary of deicing products currently available, which are used by member organizations, costs and environmental impacts. The document has been distributed to members and is available on the Workgroup website.
- Newsletters: The Workgroup produced and distributed two newsletters to members and other watershed municipalities during 2008. Topics covered in the newsletter included the status of various monitoring activities, highlights of published reports and advice on chloride reduction.
- Biological and Water Quality Study of the East and West Branches of the DuPage River and Salt Creek Watersheds by MBI Inc: A baseline biological, physical and water chemistry study of the East and West Branches of the Upper DuPage River and Salt Creek was conducted in 2006 and 2007. The report summarizing the findings is available on the Workgroup website. Results will be developed into recommendations for prioritizing improvements in stormwater management and in-stream habitat. The study will be continued, with each subwatershed being revisited on a three year rotating basis to allow the impacts of any habitat or stormwater improvement project to be evaluated.
- Stream Dissolved Oxygen Improvement Feasibility Study for Salt Creek and East Branch of the DuPage River: A final report on dissolved oxygen conditions on the East Branch of the DuPage River has been produced. The central recommendation is the removal of the dam at Churchill Woods Forest Preserve (Glen Ellyn and Lombard). The report is available on the Workgroup website.

A2. Speaking Engagements

During the reporting year, DuPage County staff presented on several stormwater management, best management practices and sediment erosion control topics. County staff presented on stormwater topics at the following six speaking engagements

*In September 2008, DuPage County experienced some of the most significant rain events in recent history. The heavy precipitation increased interest in the role that the County's Stormwater Management Division played in protecting the County's residents from physical harm and property flooding. In the months following the rain events, several presentations were made to municipal groups and residents to detail the magnitude of the storms, the rain's affect on DuPage County's waterways, and the actions undertaken by County staff, including operation of various flood control

facilities. The presentations included the Director of the Stormwater Management Division addressing officials from the City of Warrenville and residents from a homeowner's association located along Kress Creek. Additionally, engineering staff from the County presented similar information to the Stormwater Management Committee Technical Advisory Workgroup (Municipal Engineers' Conference) in the months following the storms.

*Stormwater Management Division Project Engineer presented on Dam Management and Safety at the Illinois Association of Floodplain Managers Workshop 2009 Annual Conference on Sept. 12, 2009 in Champaign, Illinois. The topic of her presentation was the McDowell Grove Dam Removal and River Restoration Project in the West Branch DuPage River.

*Four County staff Economic Development and Planning professionals presented at The Water Quality Best Management Practices (BMP) Technical Guidance Seminars held on June 27 and July 11, 2008 in the DuPage County Administration Building Auditorium. Two other County staff were also moderators for the BMP workshop. The presenters discussed BMP topics such as an overview of regulations and the BMP Manual, native plantings, and inspections, maintenance, performance, securities and easements. Reference materials included with the practices manual were as follows; Stormwater and Flood Plain Ordinance changes, BMP requirements by developer, sample guidelines for calculating partial credit for BMPs, City of Indianapolis manufactured BMP selection guide, DuPage County manufactured BMP checklist, listing of Chicago area BMP maintenance companies, drainage/detention and natural area easement provisions, and sample planning plan and planting performance standards.

*A County staff member from the Department of Economic Development and Planning presented on native area benefits at the NPDES Pollution Prevention Good Housekeeping Workshop on Sept. 12, 2008 at the Oak Meadows Golf and Banquet in Addison. The workshop was attended by various cooperating permit holders, municipalities and townships.

* A DuPage County Department of Transportation Supervisor presented on Reducing Chlorides at a Deicing Program Seminar on October 16, 2008 at the Oak Meadows Golf and Banquet in Addison. The seminar was co-hosted by the DuPage River Salt Creek Workgroup and the American Public Works Association.

DRSCW Speaking Engagements

- Workgroup meetings: The Workgroup hosts meetings every other month where presentations are made on a variety of water quality topics. The list below includes presentations that have been made at Workgroup meetings during 2008. Presentations are made available on the website after the meetings.

- February 27 DuPage River and Salt Creek TMDL Status by Bin Zhang, ENSR/AECOM
- February 27 Chloride Usage Education and Reduction Program Update by Daniel Potts, CDM
- February 27 New State Standards for DO and the DRSCW Program Area Waterways by Dennis Streicher, City of Elmhurst and DRSCW President
- February 27 Feasibility Study to Improve Dissolved Oxygen in Salt Creek and East Branch DuPage River by Melcy Pond
- April 30 Impaired Waters of Illinois, Draft 2008 Integrated Report by Bruce Yurdin, IEPA
- April 30 Restoration Projects on the West Branch DuPage River by Ross Hill, Forest Preserve District of DuPage County (FPDDC)
- June 25 Bioassessment Plan: Preliminary Results from West and East Branch of the DuPage River and Salt Creek by Chris Yoder, MBI
- June 25 Dissolved Oxygen Feasibility Project East Branch Report by Melcy Pond, HDR
- August 27 Update of the Watershed Plan for the Upper DuPage River Watershed by Karen Kabbes, KEI
- August 27 Update on TMDL Development for the Upper DuPage River and Salt Creek by Jennifer Clarke, IEPA
- October 29 Stream Response to Reduction in Phosphorous Loadings from the MWRDGC Eagan Plant by Jennifer Wasik, MWRDGC
- October 29 Overview of the IDNR Ecosystem Partnership Program and C2000 Grants by Lynn Boermann, IDNR
- December 10 West Branch Improvements Removal of McDowell Grove Dam by Ross Hill, FPDDC
- Presentations given by the Workgroup: The following presentations were made by the Workgroup outside of its bimonthly meetings.
 - - March 20 IWEA Conference, Watershed Management: Form and Function by Stephen McCracken, DRSCW

- June 5 Village of Palatine, Ambient Water Quality and Stormwater Management on Salt Creek by Dennis Streicher, City of Elmhurst and DRSCW President and Stephen McCracken, DRSCW
- Water Quality in Salt Creek. League of Women Voters by Dennis Streicher, City of Elmhurst and DRSCW President
- September 25 Regulatory Issues Committee of the DuPage Mayors and Managers Conference, Chloride Reduction Program by Dan Bounds, CDM and Stephen McCracken, DRSCW
- October 22 WEFTEC, TMDL Implementation by Watershed Organization – An Example of Formation and Function by Dennis Streicher, City of Elmhurst and DRSCW President and Dan Bounds, CDM
- November 6 Lt. Governors Committee for Management of the Illinois River, Chloride Reduction by Stephen McCracken, DRSCW
- December 16 Lower Des Plaines Ecosystem Partnership, Water Quality Evaluation of Salt Creek by Stephen McCracken, DRSCW
- Presentations hosted by the Workgroup outside of the regular Workgroup meetings. All presentations are available on the website <http://www.drscw.org/reports.htm>.
 - October 16 De-icing Program Seminar: DRSCW co-hosted this workshop with APWA Chicago Metro and DuPage County Division of Stormwater Management. Subjects covered were:
 - Alternatives for Reducing Chloride Loading from De-Icing by Steven Kaar, Central Salt
 - Reducing Chloride Use at DuDOT by John Kawka, DuPage County Department of Transportation
 - Anti-Icing: The Experience of Hanover Park by Howard Killian, Village of Hanover Park
 - Brewhouse Pre-Wet System by Larry Dunn, Warren Township Highway Department
 - Deicing Program Research and Technologies by Morton Satin, Salt Institute
 - Regulations and Water Quality: Local Chloride TMDL Analysis by Dan Bounds, CDM

A4. Community Event

DuPage County and SCARCE Rain Barrel Program

SCARCE organized a rain barrel program within the neighboring schools of DuPage County during the 2008 and 2009 school year. SCARCE distributed rain barrels to over sixty schools throughout DuPage County to promote water conservation and stormwater management education. The teachers were provided with educational material relating rain barrels into their environmental curriculum and instructions on how to paint the rain barrels. Lessons involving science, math art, and American history were incorporated into the program. Persuasive letter writing/essay prompts and presentation ideas were also explored. This rain barrel program was funded through the DuPage County Stormwater Management Division. The rain barrels were delivered to the school that chose to participate in this environmental program.





Environmental Summit

The Sixth annual DuPage County Environmental Summit “Greening” Our Transportation and Roads for community and business leaders, elected officials, scientists, architects, landscapers, engineers, highway transportation personnel, students, health professionals and the general public was offered at Benedictine University on January 8, 2009. The topics discussed at the Summit were about regional transportation planning and the environment, cleaning up our road runoff, examples of “Green Roads” such as permeable paver roads, “Green” tollways, mass transit in DuPage County, and alternative fuels such as biodiesel. Speakers from Economic Development and Planning, Chicago Metropolitan Agency for Planning, Wisconsin Department of Natural Resources, City of Warrenville, Illinois State Tollway Authority, Regional Transportation Authority, and the Forest Preserve District of DuPage County spoke at the event on various environmental issues related to transportation and fuel consumption. Environmentally friendly transportation exhibits were displayed prior and at the end of the event. Over 200 people attended the Summit. DuPage Environmental Commission and the DuPage County Board/Environmental & Transportation Committees were sponsors of this event. The exhibitors at the Environmental Summit included Army Corps of Engineers, Forest Preserve District of DuPage County, DuPage River Salt Creek Workgroup (DRSCWG), DuPage County Dept. of Economic Development and Planning, Morton Arboretum, Pizzo & Associates, S.C.A.R.C.E, Whole Foods, and other stormwater environmental agencies and consultants.

A5. Classroom Education Material

DuPage County activities

- ✓ **Illinois Association of Floodplain Society Managers (IAFSM) Conference March 12-13 2008** - Fourteen stormwater staff members attended the two-day IAFSM 2008 Annual Conference in Tinley Park on March 12th and 13th. The theme of the Conference was “*The Pursuit of Sustainability: Managing the Flood of Environmental, Economic and Social Debts.*” Some of the presentations included topics on Floodplain, Stormwater Regulations, Advances in Modeling, Levees, Watershed Planning, BMPs, Mitigation, Stream Restoration, Flood Control, Dams, and FEMA letters of Map Change.
- ✓ **Spring Brook Remeander Project Tour April 11, 2008**
The Conservation Foundation, the DuPage River Coalition and the Forest Preserve District of DuPage County held a tour of the remeandering of Spring Brook at the Springbrook Prairie Forest Preserve in Naperville. This tour was geared for community, park staff or consultants etc., but was also open to the public. Five County staff members went on the tour of the remeandering of Spring Brook. A short presentation highlighting the main parts of the project was provided to the participants followed by a walk down the stream to tour the project area. The primary objective of this restoration and habitat improvement project is to reduce bank erosion and improve water quality by reconnected the stream to the flood plain and reducing channel entrenchment. The stream channel design incorporated
- ✓ **EROTEX SOIL EROSION AND SEDIMENT CONTROL WORKSHOP – MAY 16 2008**
19 DuPage County staff members attended this soil erosion control workshop lead by Ero Tex at DuPage County. Bioengineering products such as coir logs, wattles, and V-mat were discussed and passed around the room for visualization of the product. Ero Tex is a leading supplier of products for the earthwork industry, specializing in erosion and sediment control, geotextiles and bioengineering.
- ✓ **Train the Trainer BMP sessions June 9, 2008**
Prior to the Water Quality Best Management Practice (BMP) Technical Guidance seminars in late June for municipal staff, consultants, and other interested parties, County staff participated in a “Train the Trainer” event on June 9, 2008, to train staff members in the BMP Manual and associated point system, Ordinance changes, and site design/review considerations. Many of the attendees were asked to help with training at the public sessions.
- ✓ **Intern Illicit Discharge Detection and Elimination Outfall Monitoring Training Session**
On Tuesday, **June 10, 2008**, Earth Tech, now incorporated into AECOM, facilitated a training seminar for County staff (9) and interns (7). The principle topics included an

Illicit Discharge Detection and Elimination (IDDE) program overview, illicit discharge detection field screening procedures and follow-up elimination procedures, and case studies from other communities, all conveyed through indoor presentations. The seminar concluded with a field exercise, which demonstrated appropriate sampling techniques. The training included distribution of an IDDE Outfall Screening Resources booklet, which incorporates an IDDE field equipment checklist, storm sewer pipe reference, and sample illicit discharge inspection forms.

✓ **BMP Training Session June 27 and July 11, 2008**

The Water Quality Best Management Practices (BMP) Technical Guidance Seminars were held on June 27 and July 11, 2008. The presented material detailed an overview of regulations and BMP manual, manufactured BMPs, native plantings, as well as other topics, such as inspections, maintenance, securities, and easements. Reference materials included with the practices manual were as follows; Stormwater and Flood Plain Ordinance changes, BMP requirements by developer, sample guidelines for calculating partial credit for BMPs, City of Indianapolis manufactured BMP selection guide, DuPage County manufactured BMP checklist, listing of Chicago area BMP maintenance companies, drainage/detention and natural area easement provisions, and sample planning plan and planting performance standards.

✓ **Pollution Prevention Good Housekeeping Workshop – Sept. 12, 2008**

DuPage County conducted a Pollution Prevention and Good housekeeping training seminar with the assistance of The Conservation Foundation in the fall of 2008. The workshop was held at the Oak Meadows Golf and Banquet in Addison. There were over 110 attendees at the NPDES workshop. Pollution prevention and good housekeeping employee training is required as part of our Phase II Illinois Environmental Protection Agency (IEPA) National Pollutant Discharge Elimination System (NPDES) ILR40 permit's compliance for discharges from Small Municipal Separate Storm Sewer Systems (MS4). Pollution Prevention and Good Housekeeping is one of the six NPDES best management practices (BMP's) in the ILR40 permit. This BMP measure requires that small MS4 operators examine and modify their own actions to help guarantee a reduction in the amount and type of pollution that collects on streets, parking lots, open spaces, and storage and vehicle maintenance areas that may be discharging into nearby streams and results from practices such as poor maintenance of storm sewer systems and environmentally degrading improper land development. The topics covered by the presenters at the workshop were pollution prevention for municipal operators, road salt storage, spill prevention and clean up and landscaping issues, native area benefits and native areas management.

The pollution prevention training topics will include discussions on landscape wastes, salt handling and storage procedures, proper disposal of hazardous materials, spill response protocols, equipment and vehicle cleaning and fueling, street sweeping, stormwater pollution prevention plans, illicit discharge detection and reporting, and preventative maintenance. The workshop's target audience is Public Works,

Department of Transportation, Highway and Vehicle Maintenance, Division of Stormwater, Building and Zoning Departments, municipalities, and townships. The purpose for the workshop was to educate and make our staff; municipalities, townships and other attendees aware of the direct effect actions may have on pollution into the stormwater systems and ways to prevent these environmental impacts from occurring in the future. Our pollution prevention workshop gave an overview on how to reduce or eliminate contributions to stormwater pollution. The presenters scheduled for the seminar will include a speaker from the University of Illinois discussing landscaping and ground maintenance issues, a presenter on salt handling and storage from the Village of Carol Stream, a representative from the IEPA speaking on soil erosion and sediment control practices and a speaker on spill prevention and response procedures.

✓ **Getting in Step with Phase II A MS4 Workshop for Stormwater Program Managers Staff and Regulators – September (17- 18) 2008 in Fayetteville, Arkansas**

The United States Environmental Protection Agency (USEPA), through its NPDES training course series, offered a two-day workshop entitled “Getting in Step with Phase II.” The stormwater workshop focused on all minimum control measures included in the County’s Notice of Intent (NOI) to participate in IEPA’s General NPDES Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4), permit number ILR40. The training took place on Wednesday, September 17 and Thursday, September 18 in Fayetteville, Arkansas. Specific topics included post construction runoff controls, illicit discharge detection and elimination (IDDE), pollution prevention/good housekeeping, and stormwater program development and funding. One Stormwater Management Division staff member attended this training and was able to receive good feedback regarding USEPA’s expectations for small MS4 permit compliance, as well as suggestions on implementing a successful program.

✓ **Recycling Reusing and Managing Stormwater *Using Low Impact Development Practices to Reduce Flood and Recharge Groundwater* September 17, 2008**

Two DuPage County staff attended this workshop on sustainable low impact development practices to reduce flooding and conserve water. The Lake County Stormwater Management Commission and the Chicago Wilderness Sustainable Action Team sponsored the workshop. Some of the topics covered included infiltration, groundwater recharge, bioinfiltration and rain gardens, infiltration Ordinances, The Nature of Water, Chicago Green Alley Program Sustainable Infrastructure Stormwater BMPs, Low Impact Development Functions & Practices, and the Infiltration Effectiveness & Performance Criteria.

- ✓ **Wetland Autumn Plant Identification Course – September 29- October 2 2008**
DuPage County wetland section hosted their four-day wetland and plant identification course. The educational hands-on field session was held on September 29 to October 2. The class focused on identification of key wetland indicator plant species common to Illinois and wetland delineation. Dr. Robert Mohlenbrock of Biotic Consultants led the training session. The course directly benefits the permitting program by providing necessary training to county staff and has broad participation from local wetland consultants, as well as representatives from both local and federal government agencies.

- ✓ **Certified Professional Erosion Sediment Control (CPESC) Review Course November 18, 2008**
Four County staff members attended the CPESC seminar, which focused on sediment and erosion control practices to assist staff with increased knowledge on sediment and erosion control practices and to become certified in Sediment and erosion control. The workshop was held at the DePaul University, Naperville Campus and was hosted by The Conservation Foundation funded through the DuPage County Stormwater Management Division. John Price of Price and Company, Inc. from Grand Rapids Michigan the review course. The CPESC course outline included rules and regulations, site planning and management, erosion prevention, runoff control, soil stabilization, and sediment control. A Certified Professional in Erosion and Sediment Control is a recognized specialist in soil erosion and sediment control. The certification program, sponsored by the Soil and Water Conservation Society and the International Erosion Control Association, in cooperation with the American Society of Agronomy, provides the public with evidence of professional qualifications to specialists who have met established standards of expertise, experience and knowledge. Two of the four staff members took the CPESC exam in November 2008. They have passed the first part of the two part exam and are working towards become certified in erosion control and sedimentation. We currently have two other county staff members that have obtained their licenses as registered as a Certified Professional in Erosion Sediment Control. They are both involved in the review and inspections of construction projects and special management areas.

- ✓ **Department of Natural Resources Northeastern Illinois FloodPlain Management Workshop – January 29, 2009**
DuPage County hosted this half-day IDNR Office of Water Resources and FEMA workshop focusing on State and Federal floodplain construction requirements, how the National Flood Insurance Program (NFIP) works, NFIP terminology, and updates and changes to floodplain, flood regulations, flood regulations, insurance coverage and rates, floodplain maps, post flood recovery, mitigation buyout programs. Over hundred participants attended the workshop, many of which were DuPage County staff in the Stormwater Management Division and Economic Development and Planning Department.

- ✓ **USEPA Workshop Sanitary Sewer Overflow Analysis and Planning SOAPTOOLBOX – Feb 11, 2009** hosted by DuPage County in the County’s auditorium and sponsored by the USEPA. Sanitary Sewer Overflow Analysis and Planning (SSOAP) Toolbox software was developed from a cooperative research and development agreement between the USEPA and Camp Dresser & McKee Inc (CDM). SSOAP can be used to assist sanitary sewer overflow communities in assessing widespread sewer capacity problems and developing mitigation solutions. The workshop covered an overview of the SSOP toolbox capabilities, demonstrations and applications of the software product.

- ✓ **USEPA TETRA TECH ON SYSTEM FOR URBAN STORMWATER TREATMENT AND ANALYSIS INTEGRATION (SUSTAIN) WORKSHOP – Feb 12, 2009**
DuPage County hosted a one-day workshop in our auditorium offered by the USEPA on the System for Urban Stormwater Treatment and Analysis INtegration (*SUSTAIN*) program. *SUSTAIN* is a decision support system for placement of BMPs at strategic locations in urban watersheds based on cost and effectiveness. It is developed by Tetra Tech, Inc. under contract with USEPA. *SUSTAIN*, an ArcGIS-based evaluation and decision-support framework, is designed for analysis and determination of Total Maximum Daily Load (TMDL), urban watershed planning, and source water protection programs. *SUSTAIN* is scheduled to be released to a targeted beta testers in March 2009 and a full release is planned in the Fall of 2009. Numerous County staff that will be directly involved with the reviews of construction permits with the incorporation of best management practices attended this informative training session. The workshop covered the following topics:
 1. an overview of *SUSTAIN* and design process
 2. descriptions of the major system components
 3. demonstration of *SUSTAIN* operations and case studies and future efforts.

- ✓ **Illinois Association for Floodplain and Stormwater Management (IAFSM) Conference March (11-12) 2009**, Four County staff members attended the annual IAFSM conference in Champaign, IL. One of the four staff members gave a presentation on the West Branch McDowell Grove Dam Removal Project. The presentation topics included information on Dam Management and Safety, Green Infrastructure, Stormwater Utilities, Stormwater Master Planning, Floodplains, Floodplain Mapping in the Digital Age, Infiltration Modeling, Water Quality Protection and Improvement, Levees, Wetlands for Community Floodplain Managers, BMP Case Studies, Mitigation Planning and Projects, Flood Remediation Case Studies, Regulations and Enforcement, Hydrologic Research, FEMA Paperless Maps The Future of the CFM Program, and Stream Restoration and Management.

- ✓ **USEPA SYSTEM FOR URBAN STORMWATER TREATMENT AND ANALYSIS INTEGRATION (SUSTAIN) BETA TESTING WORKSHOP – March (24-25) 2009**

A County Stormwater Management staff member was invited by Tetra Tech to participate as a Beta Tester during a two day Beta Testing Workshop. The BMP workshop for the SUSTAIN software product was held at a Tetra Tech office in Fairfax, Virginia. The workshop was offered by the USEPA and TetraTech. The two-day Beta Testing workshop on the System for Urban Stormwater Treatment and Analysis Integration (*SUSTAIN*) Water Quality Best Management Practice (BMP) analysis program provide the group of stormwater professionals an opportunity to evaluate the effectiveness of BMP combinations and placements within watersheds. This training offered hands on experience with running BMP simulations and gaining familiarity with the new BMP optimization and analysis software, which can then be used for the evaluation and review of BMP's for new development and redevelopment construction sites over one acre. SUSTAIN is a software program which utilizes hydrology, watershed and water quality analysis, and Geographic Information System to analyze the effectiveness of BMP's in reducing runoff, implementation and planning of low impact development practices, and obtaining optimal results with the least amount of associated cost's at selected locations within the watersheds and stream reaches. The USEPA is planning on releasing a full version of the SUSTAIN program for public use in the fall of 2009.

(SCARCE Water Quality Educational Activities)

-In April 2008 the county entered into an agreement with School & Community Assistance for Recycling & Composting Education (SCARCE) to provide professional environmental education services through teacher training and community outreach. This agreement expired on June 30, 2008. The services discussed below have been or will be performed during the contract term above.

SCARCE - County Activities

TEACHER PROGRAMS:

SCARCE will present Teacher Workshops on water quality topics including; planning, coordinating site visits, scheduling, registration, confirmation, maintaining records for teacher's Continuing Professional Development Units and Graduate Credit documentation.

Hold 6 Watershed Model Workshops – these 2 hour workshops can be held at our site in Glen Ellyn or at schools.

Hold 3 Groundwater Flow Model Workshops – these 4 hour workshops will be held at our site due to the amount of set up time and supplies needed.

Hold 1 “Shed Those Watershed Blues Teacher Workshop”- 2 day workshop. This is a 1 credit graduate level course through Aurora University. The first day is classroom work at our site. The second day we visit 3 DuPage County watersheds teaching water testing and we visit 4 BMP for stormwater management. We travel on a bus and teach between sites.

The “Where Is Away Teacher Workshop” is a 5.5 day graduate level course. Teachers earn 3 credits through Aurora University. One day is spent at the Wastewater treatment plant and a yardwaste compost facility. We travel on a bus and teach between sites.

Hold 2 “Sustainable Design Building Teacher Workshops”, these full day workshops will be held to educate teachers about the science behind green building. These workshops will showcase green roofs, permeable pavement, native plants, rain barrels, silt fences, bio-swales, recycled content products, energy conservation, underground water storage and much more. We will travel by bus and teach between sites.

SCARCE will further develop and hold the second annual Sustainable Design Challenge for high school students. Meetings will be held with sponsoring teachers, architects and industry representatives. The focus of these Green and Sustainable designs will be BMP for stormwater management including green roofs, permeable parking surfaces, bio-swales and native plants. Students will bring their models to the County Board meeting in April. A meeting for all of the students and the teacher sponsors will be held at the county on the same day. SCARCE will create a CD/power point of the models and students to use with future projects.

–SCARCE held their second Sustainable Design Challenge on Tuesday April 8th 2008 at the DuPage County Administration Building outside of the County Board office for high school student teams to educate other students and their teachers about designing and building a green building with a focus on “best management practices” for stormwater management, such as green roofs, native plants, irrigation systems, geothermal heat, and permeable parking surfaces. The High School Sustainable Design Challenge is a program SCARCE created a year ago to educate teachers and for them to educate their students about LEED standards and then through their own research students then build their Sustainable Green building model The high school students showcased their models, power point presentations, poster boards, and notebooks on display from nine to noon in commemoration of Earth Month. The Green Design models were showcased outside of the county board office for the County Board meeting, employees and the general public to view. This green building design showcase event is partially funded by DuPage County through the stormwater and environmental committees.

High school science, design, and economic teachers attended meetings to learn about green buildings and how careers in product design and services, green construction, chemistry, landscaping, forestry, energy conservation, parking lot and roadway construction, roofing, plumbing, and lighting are changing to consider environmental impacts. In March 2008 teachers attended a green building workshop sponsored by SCARCE to learn through experience how “best management practices” are being incorporated into building design to improve stormwater management, energy conservation, cleaner air, recycling and more. Volunteer LEED (Leadership in Energy and Environmental Design) accredited chemists and architects were involved in meetings

to plan the green building design event and offered their time to help students and their sponsors with questions and ideas for their displays.

The high school students were given a challenge to learn about green buildings and then design and create a room, building, or city demonstrating green practices. Participating students researched products, websites, and publications to find green alternatives for their exhibits and models. The students displaying their designs received certificates of participation by SCARCE. Approximately fifty students and six teachers participated in the green design event. Six DuPage County High Schools partook in the Green Building Design Challenge. The six schools that participated were the Willowbrook High School in Villa Park, Wheaton North High School, Wheaton Warrenville South High School, Glenbard South High School in Glen Ellyn, Downers Grove North, and Naperville North High School.

COMMUNITY OUTREACH PROGRAMS:

SCARCE will plan and present water quality issues to Community Groups through booths, workshops and presentations by:

Sponsoring 6 Community Booths, such as the Earth Summit at Benedictine University, Prairie Days in Lombard and other Environmental Fairs, we will bring the watershed model, groundwater flow model, green vegetative roof or other water quality education and information.

Presenting 30 Youth, College, Civic Group Programs on water quality problems and solutions. These can include the watershed model, groundwater flow model and Best Management Practices. Examples of youth groups include scouts, 4H, and environmental clubs. Civic groups are every thing from Rotary Clubs, Garden Clubs, businesses, chambers of commerce and Environmental Improvement Commissions. College classes usually come to our site.

SCARCE will develop and organize 5 Green Building Tours for DuPage County municipal and community members. These bus tours will travel to buildings, landscapes and permeable surface areas to showcase BMP for Stormwater management as well as other LEED attributes

SUPPORT SERVICES - RESOURCE ROOM, SUPPLIES & COORDINATION:

SCARCE will research, stock and maintain a supply of brochures, pamphlets, activity booklets and posters on watershed, Stormwater, soil erosion and BMP solutions for water quality issues in the Environmental Resource Room for the use of residents, teachers and businesses.

SCARCE will continue to maintain and restock the loaner Groundwater Flow Models and the watershed models for the use of teachers as well as an on going display at our site.

Promote the use and availability of water quality videos and DVDs for loan to teachers and community groups.

Scheduling the loaner models and media materials, and replacement as needed.

Answer phone call questions and emails regarding watershed issues, native plants, green roofs, permeable pavements, rain barrels and composting.

SCARCE will purchase the supplies for these tasks including CDs, DVDs, resource materials, student awards, reception materials, accessory supplies for the tours and models and office supplies.

SCARCE will assist the county in the promotion of these projects and water quality issues through the Ripples newsletter, the Green Bulletin, the Regional Office of Education, Chambers of Commerce and newspapers.

SCARCE will work to use bio-diesel fueled buses or Hybrid buses when possible. All of our workshops and events will encourage car-pooling, reusable items and recycled content products.

SCARCE will prepare a report of these activities .

SCARCE sets up their watershed model at all times in their resource room so visitors can view it during all the tours.

SCARCE organizes many environmental educational events for scout groups as well.

***A.1** SCARCE distributed issues of the **RIPPLES newsletter** to various teachers, administrators, youth group leaders, and other educators countywide. The **RIPPLES newsletter** is available for viewing in an electronic version. This newsletter advertises upcoming workshops and local area environmental events, contains articles on **water, water quality**, and other environmental issues, and promotes the Earth Flag and **Ecology Flag** award programs.

A.1 SCARCE distributed issues of the **Green Bulletin** electronically to thousands of county citizens. The Green Bulletin announces watershed exhibits and community events. The Green Bulletin is similar to the RIPPLES newsletter but is distributed solely in an electronic format.

A.3 SCARCE conducted a waste audit and during the process, they described the benefits related to water preservation and purity. They measured liquid waste as well as described

the high percentage of water wasted as food is discarded – food having more than an average sixty percent water content.

A.4 SCARCE designed a Green DuPage Patch Scouts program. The Green DuPage Patch is a program designed to enhance our awareness of the environment and the issues involving it. The program looks at some of our natural resources and areas related to them. The five categories explored in the Green DuPage Patch program are water, 3R's (reduce, reuse and recycle), air, energy and soil. To earn a patch the scouts must choose three out of five categories for their projects. The three categories are explored through investigation of the natural resource, acted on by designing a plan or project, which demonstrates concern, sharing knowledge and results of the project with others, and documentation of the project. The Green DuPage Patch is funded by DuPage County.

During their 3Rs educational program, SCARCE discusses reducing the use of water in a practical manner; on a daily basis. This not only extends the supply of fresh water, it reduces pollutants from energy supplies that would have been used to create the flow of water into homes. SCARCE incorporates the topic of Native Plants which need less water, root systems help manage stormwater and do not need fertilizer, which reduces water pollution runoff. When any item is reduced or reused rather than purchasing a new product, the amount of water used and pollutants produced through the manufacturing of new products is reduced. The fact that recycling saves a great percentage of water when compared to harvesting raw materials to manufacture new items was also discussed. The 3Rs program also touches upon household hazardous waste - such as fertilizer and pesticide usage, medicine disposal, etc. Many participants were surprised to learn there is such a close relationship between what washes off our property (such as dog waste) or gets flushed down our toilets and the health of the water in direct systems such as creeks and rivers as well as the quality of the water that is returned to us.

SCARCE has taken the opportunity to discuss in depth household hazardous waste – such as fertilizer and pesticide usage, medicine, and oil paint disposal, etc. to the general public.

A.5 The **Ecology Flag** award program recognizes a school for receiving education and conducting a project related to **water** or other type of pollution and conservation. Steps to earn the **Earth Flag** award include a staff in-serve, **water**, energy, or waste audit, and a **pollution reduction activity**.

A.5 In the **SCARCE Resource Room** there is a permanent display of watershed model exhibits for visitors to examine. There is a Watershed and Landfill Model (related to groundwater issues) that is also permanently on display in the education room to impart knowledge on anyone who visits the center. The models spark discussions of Native Plants, the benefits of trees, stormwater drain pollution, wastewater treatment operations, pesticides, loose soil and turbid water, rain barrels, green roofs, Household Hazardous Waste disposal, leachate collection, groundwater purity and other related topics. The

resource room also has various program brochures, handouts and videos available to the public relating to water pollution related issues. The resource room functions and operates with partial funding from DuPage County.

During eco-club, church, train the trainer, green building workshops and other such meetings the topics above were covered and techniques on how to disseminate the information was discussed.

A.4 COMMUNITY EVENTS

✓ 103 Youth Leadership/Scout Group Presentations on:

3 R's

Papermaking

Water Quality & Quantity

Household Hazardous Waste

Composting

Watershed Model

Battery Jugs

Trash to Treasure

Soil Conservation

Phosphates

Bioswales

Green Roofs

Permeable Pavers

Rain Barrel

Rain Garden

Litter to Glitter

Medicine Disposal

Introduction to Sustainability

Life Cycles

Increase Recycling

White Roofs

Energy Audit

Energy Bike

There were a total of 1,999 participants for the Youth Leadership and Scout Group Presentations.

✓ 312 Committee/Club/Agency/Business Presentations on: same as list above.

There were a total of 15,488 participants for the Committee/Club/Agency/Business Presentations.

A.5 CLASSROOM EDUCATION MATERIALS

✓ 42 Teacher In-Service/Modeling on:

Earth Flag

Energy Bike Recycling

Conservation; Waste Audit

Ecology Flag; Recycled
Paper
Earth Flag/Zero Waste Grant
Zero Waste
Energy Conservation
Energy Bike/energy
conservation

(820 teachers/educators and 2,233 students participated)

✓ 20 Workshops on:

Groundwater
Green Building
Green Building Tour
Healthy Water/Healthy
People: groundwater
Watershed Model
Watershed Issues: Shed those
Watershed Blues
Where is Away (WIA)
Watersheds
Energy and Conservation
Environmental Natural

Resources

✓ 14 Meetings

Energy Conservation
Sustainable Design Challenge
Soil cycle/conservation
Conservation Committee
Zero waste planning
Green Design Challenge
Watershed/Groundwater

✓ 1 Ceremony

Sustainable Design Challenge

3Rs: During our 3Rs educational program, we discuss **reducing** the use of water in a practical manner; on a daily basis. This not only extends our supply of fresher water, it **reduces** pollutants from energy supplies that would have been used to create the flow of water into our homes. We incorporate the topic of Native Plants, which need less water, root systems help manage stormwater, and do not need fertilizer which reduces water pollution runoff. When we **reduce and reuse** any item rather than purchasing new products, we reduce the amount of water used and pollutants produced through the manufacture of new products. We also discuss the fact the **recycling** saves a great percentage of water when compared to harvesting raw materials to manufacture new items. The 3Rs program also touches upon **household hazardous waste** - such as fertilizer and pesticide usage, medicine disposal, etc. Many are surprised to learn there is such an intimate relationship between what washes off our property (to include dog waste) or gets flushed down our toilets *and* the health of the water in direct systems such as creeks and rivers as well as the quality of the water that is returned to us.

Recycled Paper Making: We discuss the fact that recycling saves a great percentage of water when compared to harvesting raw materials to manufacture new items.

Waste Audits: While we conduct our waste audits, we describe the benefits related to water preservation and purity. We measure liquid waste as well as describe the high percentage of water wasted as food is discarded, food having more than an average 60% water content.

HHW: Household Hazardous Waste - Often we have the opportunity to discuss in depth HHW - such as fertilizer and pesticide usage, medicine, CFLs and oil paint disposal, etc. Many are surprised to learn there is such an intimate relationship between what washes off our property, gets flushed down our toilets, potential landfill leaks *and* the health of the water in direct systems such as creeks and rivers as well as the quality of the water that is returned to us.

Energy/Energy Conservation: Most energy sources that we utilize today incorporate water usage in production and/or cause water pollution as an unintended consequence. In Northern Illinois, nuclear power provides most of our electrical needs. Nuclear power production is associated with great amounts of water for cooling, storage of radioactive waste, and thermal pollution in surrounding waterways.

Ongoing: We have a Watershed and Landfill Model (groundwater issues) that are always on display in our education room to help us educate anyone that walks through our doors!! These models spark discussions of Native Plants, the benefits of trees, stormwater drain pollution, wastewater treatment operations, pesticides, loose soil and turbid water, rain barrels, green roofs, Household Hazardous Waste disposal, leachate collection, groundwater purity, etc.

****During eco-club, church, train the trainer, green building and other such meetings** - the above defined topics are covered and techniques on how to disseminate the information are discussed.

All of the teacher workshops, in-services, meetings, and modeling opportunities include discussions about water conservation. The purity and continual availability of this natural resource is connected to our discussions of energy use and natural resources,

building design (rain barrels, green roofs, native plants, etc.). SCARCE workshops directly relate to water supply, many of our teachers get the opportunity to have a hands-on experience with water systems and issues. SCARCE not only demonstrates, but also allows time for teacher interaction, with their watershed model and/ or our groundwater flow model. Several teachers have had the good fortune to join us in visiting local watersheds, waste-water treatment facilities, landfills, recycling plants, etc. - places that have a very close relationship with the health of our water supply now and for future generations.

**Teachers often check out our Watershed and Groundwater Flow Models for several days at a time to use in their classrooms.

In 2008 the county entered into an agreement with The Conservation Foundation (TCF) to provide professional environmental education services. This agreement was renewed through May 30, 2009. The services discussed below have been or will be performed during the contract term above.

A.1 DISTRIBUTED PAPER MATERIALS

A.2 SPEAKING ENGAGEMENTS

Conservation@Home

Conservation @ Home

The Conservation @ Home program promotes the use of native landscaping, rain gardens, and rain barrels to homeowners, businesses and developers in DuPage County. Conservation @ Home provides a way to educate the citizens of DuPage County and provide them with the resources they need to improve water quality on an individual basis. Staff conducts evaluations and certifications of private, school, and business properties throughout county. TCF also provides information and resources for planting and maintaining certified properties and promotes the program through our Speaker's Bureau and community presentations. For the reporting period, 23 new residential properties were certified within DuPage County. In addition, the following non-residential properties were certified under the Conservation @ Home program: Cantigny in Wheaton, Aquascape Design in St. Charles, and Lyman Woods in Lombard. Staff also made 18 public presentations on Conservation @ Home and reached over 500 citizens at local civic, homeowner and garden group meetings; colleges; and community meetings in Glen Ellyn, Lisle, Naperville, Warrenville, Wheaton, and Winfield. In addition, Conservation @ Home was featured in displays at the DuPage Environmental Fair, DuPage County Fair, Green Earth Fair, Lombard Lilac Festival, Lombard Prairie Days, the Morton Arboretum and more.

Staff also taught a class at College of DuPage entitled "Landscaping for Wildlife". The class learned about positive changes that can be made to benefit wildlife quantity and diversity. The class also planted native vegetation along Winfield Creek in Winfield as a class project.

The table below shows how many reprints of Conservation @ Home brochures were produced and distributed.

Type of Brochure	Amount
Conservation @ Home general brochure	172
Rain Barrel brochure	1650
Conservation @ Home Newsletter	518
Rain Garden brochure	560
Conservation @ Home “How To” brochure	5000

Technical Workshops

Good Housekeeping/Pollution Prevention (This workshop was a requirement under the 2007 contract, but was not included in the previous Water Quality Education Report, so a summary is provided here.)

A municipal/technical audience workshop on the sixth minimum control measure of the National Pollution Discharge Elimination System (NPDES) permit program, Good Housekeeping and Pollution Prevention, was held from 8 a.m. to noon on September 12th, 2008 at Oak Meadows Golf and Banquet in Addison. A “Save the Date” postcard was either mailed or emailed to a distribution list provided by DuPage County Stormwater approximately one month prior to the workshop. In addition, the information was circulated to the municipal engineers list. There were 111 attendees that heard from six speakers ranging from state regulators to a university professor. A survey was passed out at the seminar to gather feedback about the workshop and topics for the future. The results of the survey were tabulated and forwarded on to the County after the workshop. One survey question asked for suggestions for future seminars. The most common responses included a seminar on native plants, further seminars helping communities to meet their NPDES requirements and alternative deicing measures. Certificates for professional development hours were handed out to attendees. A copy of the “Save the Date” card, agenda, survey and certificate are included with this report.

Certified Professional in Erosion and Sediment Control

A Certified Professional in Sediment and Erosion Control (CPESC) review and exam was held on November 18th and 19th, 2008 at the DePaul University Naperville Campus. A CPESC is a recognized specialist in soil erosion and sediment control. Individuals are certified based on an exam, education and experience levels. Through the education of professionals, NPDES compliance is realized and a further appreciation for water quality. A flier advertising the CPESC review and exam was emailed to a distribution list provided by DuPage County Stormwater approximately two months before. In addition, the flier was circulated to the municipal engineers list and the testing company, Envirocert, posted a notification on their website. There were 59 people that attended the review session and 31 people took the exam. Certificates for professional development hours were distributed to attendees. A copy of the flier and certificate is included with this report.

Illicit Discharge Detection and Elimination

A municipal/technical audience workshop on the third minimum control measure of the NPDES permit program, Illicit Discharge Detection and Elimination, is being planned for May 27th, 2009 at the Jack T. Knuepfer Administration Building Auditorium. A flier will be emailed to a distribution list provided by DuPage County approximately one month prior to the workshop. The workshop will also be announced through the municipal engineers list. Speakers are currently being identified for the program.

Speaker's Bureau and Programs

Staff has made presentations to a variety of audiences on a variety of topics under the Speaker's Bureau task. Topics have included water conservation, eco-friendly yards and landscaping for wildlife to name a few. Presentations have been made to audiences throughout DuPage County, including Naperville, Glendale Heights and College of DuPage.

A.3 PUBLIC SERVICE ANNOUNCEMENTS

✓ **Storm Drain Stenciling Program***

The Storm Drain Stenciling Program (SDS) has evolved over the past years and we are now seeing greater involvement on the part of municipalities. **Downers Grove, Villa Park and Naperville** continues to distribute supplies to local groups such as the Eagle Boy Scouts. Troop 9 of the Eagle Boy Scouts stenciled 93 drains, Troop 95 stenciled 706 drains and Boy Scouts 888- Eagle stenciled 316 drains promoted by the Village of Downers Grove. The **Village of Naperville** continues to promote stenciling in 2006 and sponsored the Boy Scouts Troop 888, Elmwood School, Ellsworth School and the Illinois Smallmouth Alliance. The **Villa Park Environmental Concerns Commission** began a regular program of stenciling that continued in the spring of 2006. The Eagle Scout Project volunteers stenciled approximately 514 drains in the spring sponsored by **Villa Park**.

The program was promoted in presentations to local scout groups, school ecology clubs, homeowner associations and Wheaton College biology classes. In addition we had displays at the four *Tribute to DuPage Rivers* events held in Naperville, Itasca, Lisle and Carol Stream this summer. In the past year we have distributed over 3100 informational door hangers.

STORM DRAIN STENCILING

Storm Drain Stenciling Report 2008

Group	Municipality	# Volunteers	# Drains	# Door Hangers
Hope Church, Boy Scouts Troop 303 – Brandon Kynicki	Wheaton	11	108	700 door hangers
Three Fire Council – Boy Scouts – Chris Pombert	Bloomingtondale	12	184	800 door hangers
Ellsworth Community Builders' Club – Bruce Randolph	Naperville	33	32	100 door hangers
Boy Scout Troop 81 Eagle Scout Project	Aurora	35	261	1000 door hangers
Troup 34 – Eagle Scout Project	Wheaton	24	58	500 door hangers
Whittier Elementary School Green Team	Downers Grove	14	22	
Totals		129	665	3100

A.4 COMMUNITY EVENTS

✓ **River Sweep – May, 2008**

Illinois Environmental Protection Agency – Annual Facility Inspection Report – NPDES Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4)

March 2008 – March 2009

Page 27 of 77 – Section D

Date of Event: May 17, 2008 (Plainfield), June 7th, 2008 (County-wide) and additional dates

Number of Participants: Approximately 375

Area Covered: Approx. +30.5 miles

West Branch DuPage River watershed, Carol Stream, retention ponds – +3 miles

West Branch DuPage River, Ferry Creek – 2 miles

West Branch DuPage River, Naperville Riverwalk to Weigand – 5.6 miles

West Branch DuPage River, Maple Grove – 0.5 miles

West Branch DuPage River, Warrenville Grove to McDowell Grove – 5 miles

Rott Creek, Hitchcock Woods, Lisle – 0.75 miles shoreline

East Branch DuPage River, Community Park, Lisle – 2.5 miles shoreline

East Branch DuPage River, Hidden Lake Forest Preserve, Lisle – 0.25 miles

East Branch DuPage River, Trout Farm Area, Bolingbrook – 3 miles

East Branch DuPage River, Churchill Woods, Glen Ellyn – 2 miles

Salt Creek at Odeum, Cricket Creek, Villa Park – 2 miles

DuPage River main stem, Mink Creek, Lily Cache Creek, Various roadways, Plainfield – 2.25 miles

Greene Valley Forest Preserve, Naperville – 1 mile

Sites and Tons of Litter: Approximately +4.4 tons

Site	Liaison/Group Coordinator	# of bags/ lbs. of trash
Churchill Woods Forest Preserve – Glen Ellyn	Nancy Ristau	0.085 tons
Westwood Creek – Addison	Rick Federighi/Ron Remus	0.25 tons
Green Valley – Woodridge	Ed Mack	0.25 tons
Community Park/Hitchcock Woods - Lisle	Mary Lou Kalsted/Al and Nick Zubenko	0.3 tons
Hidden Lake - Downers Grove	Dave Gorman	1 bag/5lbs.
Cricket Creek/Odium - Addison	Jan and Ellen Stortz	0.25 tons
Plainfield	Sara Leach/Jan Proulx	0.25 tons
Naperville/Maple Grove - Downers Grove	Sue George	1.3 tons
McDowell Grove/Warrenville Grove - Warrenville	Jim Kleinwachter	0.58 tons
Bolingbrook	Alice Eastman	0.41 tons
Wheaton (ongoing)	Phil Landrum	0.015 tons
Carol Stream (ongoing)	Jim Knudsen	0.75 tons
Total		4.44 tons

Types of Litter:

plastic bottles, aluminum cans, Styrofoam pieces, shoes, balls, planting buckets, computer monitor, paper, plastic bags, 1 Vacuum Cleaner, 1 Bookcase, 1 CD Player, Several CD's, DVD's, and VHS tapes,
1 Man's suit- size 44, comforters and sheets, pillow cases, 10 hub caps, 10 cases of empty beer bottles,
a pallet, a plastic pool, a road sign, 10+ bags of misc. trash (mostly plastic, a few cans) and many golf balls,

leather jacket, bicycle, construction cone & misc. bottles, cans, Styrofoam/plastic, computer, car fender, traffic cone,
packing peanuts, softballs, 7-19' aluminum pipes, 3 truck tires, small frig., window air conditioner, general trash,
5' foam spider, bottles, paper, food wrappers, tires, patio chair, carpet, balls, grocery cart, cans, bottles, paper,
buckets, silverware, cooler, bike parts, implement equipment, tire, bottles, plastic, cans, 500 lbs. of sod, bottles.

Municipalities are taking more initiative to coordinate clean-ups locally. With more municipalities stepping up to coordinate local clean-ups we were able to expand the time-frame of the Sweep beyond June 6 to include dates from Mid-May to September. This proved a successful change and we plan to continue it in 2009.

A.5 CLASSROOM EDUCATION MATERIALS

✓ MIGHTY ACORNS

Program Overview - The Conservation Foundation (TCF) has delivered the Mighty Acorns® stewardship-based biodiversity curriculum for students in 4th through 6th grades to nearly 400 students each year in DuPage County since 1997. The program provides hands-on experiences through stewardship of land and water resources with the goal of instilling in young people a sense of stewardship toward natural areas by involving them in caring for a natural area in their own community. The Conservation Foundation works in partnership with Chicago Wilderness, the Forest Preserve District of DuPage County (FPDDC), and West Chicago Park District to deliver the program to three DuPage schools at three sites. Approximately 375 students from 15 classes at Currier, Wegner, and Pioneer schools in West Chicago participated in the Mighty Acorns Program in 2008/2009. In addition to delivering the program to the students, TCF staff meets with the new teachers and volunteers to train them in the curriculum and activities. All three sites in the program include woodlands and wetlands (fens, wet prairie and detention pond) and we will be implementing the new wetland Mighty Acorns curriculum activities in our work with the students. Students receive in-class instruction on ecology and biodiversity three times each year as part of each season's activities.

Mighty Acorns Program 2008-09

School	Number of Classes			Totals
	4 th grade	5 th grade 2008	6 th grade	
Currier	2	3	3	200
Pioneer	4			100
Wegner	3			75

Staff and Volunteers -

The Conservation Foundation (TCF) staff and volunteers met with the students three times during the school year – spring, fall, and winter – to lead the students in restoration activities. In addition, TCF staff visited each class prior to each field trip and presented a lesson on

biodiversity concepts and natural history that dovetailed with the field activities. The quality and consistency of program delivery was considerably improved this year by having paid part-time staff available to lead activities with volunteer support.

During the report year, Mighty Acorns students, teachers, and volunteers contributed approximately 275 hours of stewardship service for the Forest Preserve and 150 hours for West Chicago Park District. Inclement weather caused us to cancel some fall and winter outdoor sessions and we were not able to reschedule them this year due to weather, school schedules, and seasonal changes.

In the spring, students pulled nearly 160 large garbage bags of garlic mustard at Blackwell, 60 bags at Pioneer Park.

In the fall, Currier School students collected small amounts of prairie seeds of *Little Bluestem*, *Big Bluestem*, and *Tall coreopsis* at Blackwell and gave them to the Forest Preserve district for re-distribution. At Pioneer Park, students cleared approximately .75 acre of invasive Buckthorn trees. At Prestonfield Park, students cleared approximately .5 acre of invasive Buckthorn trees.

In the winter, students cleared invasive Buckthorn and other weedy trees from the woodlands adjacent to Currier School (approximately 1.5 acres) and Pioneer School, (approximately .75 acres). Wegner School's trip was cancelled due to inclement weather

Task Force

The Conservation Foundation education staff sits on the board and task forces of the Mighty Acorns Partnership and coordinated the development and launch of the Mighty Acorns website www.mightyacornshome.org.

ENVIROTHON

Program Overview – The Conservation Foundation has partnered with Soil and Water Conservation Districts to hold this natural resource responsibility for writing the aquatics portion of the test as well as providing the teacher workshop during the competition. Teams of five students work with a teacher/coach to learn about issues and solutions regarding wildlife, soils, forestry, aquatics, and a topic that changes each year. Teams compete against schools in the northeast region at the Northeastern Illinois Envirothon in April. The winning team goes to the state competition in May and the state champs to the national Canon Envirothon in July. Each winning team member at the national level receives a scholarship.

2008 Results – DuPage County was represented by five high schools in 2008.

2008 Northeastern Illinois Envirothon

2008 Results DuPage County was represented by five high schools in 2008: Willowbrook, Driscoll Catholic, Wheaton North, and Waubonsie Valley.

2008 Northeastern Illinois Envirothon

DuPage County School	County Rank (6 teams total)	Regional Rank (36 teams total)	State Rank (16 teams total)	National Rank (50 teams total)
Willowbrook	2	4	n/a	n/a
Driscoll Catholic	4	18	n/a	n/a
Waubonsie Valley	1	3	n/a	n/a
Westmont Team 1	6	26	n/a	n/a
Westmont Team 2	5	24	n/a	n/a
Wheaton North	3	5	n/a	n/a

B. Public Participation/Involvement

- **B.3 Stakeholder Meeting**
- **B.4 Public Hearing**
- **B.5 Volunteer Monitoring**

■ **B.3 Stakeholder Meeting**

MEASUREABLE GOALS, INCLUDING FREQUENCIES:

The Municipal Engineers advisory group and the DuPage County Water Quality Stakeholder Committee will meet on a regular basis to review and discuss program development as it pertains to Appendix J of the DuPage County Stormwater Management Plan and the Federal Mandates such as the NPDES Phase II and TMDLs. This may include ordinance, best management practice, water quality, or other relevant discussions. The committee will evaluate the most efficient and practicable methods of meeting the six minimum control measures of the NPDES Phase II by developing Local Qualifying Programs and overseeing their implementation.

YEAR 6 SUMMARY MILESTONE:

Complete and address any milestones from Year’s (1-5) from first Notice of Intent of the original ILR40 NPDES Phase II permit that have not been implemented for this minimum control measure.

COMPLETED TASKS IN YEAR 6:

The County has presented its Illicit Discharge Detection Elimination Ordinance to the Stormwater Committee in March 2008. A thirty-day open public review comment period was provided for those interested in commenting on the structure of the County’s IDDE Ordinance.

- ✓ Water Quality Stakeholders IDDE Chapter Work Group continued to meet at DuPage County and included municipalities, consulting engineers, county staff, developers, environmental groups, municipal engineers, regulatory agencies, and townships. Approximately 25 to thirty people attended the workgroup meetings. The group met eight times during the reporting year to fulfill its mandate to recommend how the county will address the state and federal

water quality regulations. The focus topic of the meetings was the Illicit Discharge Detection and Elimination (IDDE) Program permit requirements. The major topics discussed at the meetings were the Illicit Discharge Detection and Elimination Ordinance, Guidance Document and plan development, and the Intergovernmental Agreements for full and partial participation into the County's IDDE Program. The full participation will include monitoring and tracing of the outfalls the municipality and subsequently the partial participant will only include the monitoring of the outfalls for the municipality.

- ✓ **DuPage River Salt Creek (DRSCW) TMDL Workgroup** - The group is comprised of representatives from wastewater treatment plants, municipalities, IEPA, Forest Preserve District of DuPage County, environmental groups, and other interested parties. Their mission is to bring together a diverse coalition of stakeholders to work together to preserve and enhance water quality in Salt Creek and the East and West Branches of the DuPage Rivers and their tributaries. The workgroup plans to do this by collecting reliable and viable water quality data, investigating the options to meet water quality standards, and implementing a coordinated effort to install capital improvement projects and best management practices in the watersheds. During the periods March 1, 2008 to March 31, 2009 the Workgroup met 6 times. In addition to these meetings the group also held regular committee meetings tasked to manage specific programs within subcommittees. These committees included the monitoring committee (probe deployment and bioassessment), and the DO committee (tasked with overseeing the contract to research dissolved oxygen impairments on the East Branch and Salt Creek) and individual watershed committees for West Branch, East Branch and Salt Creek. The group's purpose is to respond to the TMDL's established by the EPA for Salt Creek and the East Branch waterways by developing a watershed monitoring plan, gathering data, and verifying and evaluating potential remedies to the identified impairments along Salt Creek and the DuPage River. The county appropriated \$11,799 from its Public Works fund, \$25,000 from its Stormwater fund towards that effort during this permit year. DuPage County contributions paid approximately 9% of the bills at the DuPage River Salt Creek Total Maximum Daily Load (TMDL) Workgroup in 2008-2009. The DuPage River Salt Creek Workgroup works through the DuPage County Water Quality Stakeholders Committee to address NPDES Phase II non-point source pollution issues. The group has increased its membership to 61 agency members and 18 associate members.

Between March 1, 2008 to March 31, 2009 the Workgroup completed of initiate the following:

DuPage River Salt Creek Workgroup Activities 2008 - 2009

Meetings were held every second month starting in February. Meetings are open to the public and are attended by NPDES permit holders, environmental organizations and other private party's.

Volunteer Monitoring

- Chloride – The DRSCW conducted monitoring of ambient chloride levels at six locations in the service area. Hourly conductivity data was collected 24 hours a day from December to March for 2007-8 and 2008-9. Chloride samples collected and

compared to conductivity data generated at each site in 2007-8 had shown that conductivity was an excellent indicator of chloride during winter months in local waterways.

- Dissolved Oxygen – Hourly DO was monitored at ten locations in the service area. Additional data sets for pH, temperature and conductivity were also built. All data was collected under a Quality Assurance Plan agreed on with IEPA.
- Bioassessment – No sampling was done under the Bioassessment Plan in 2008. Data gathered in 2006 and 2007 was compiled and analyzed.

Dissolved Oxygen Monitoring Project:

Stream DO monitoring is in place at the sites listed in Table 1.

Site Code	River	Site Description
WBAD	West Branch	Head waters of West Branch (Hanover Park)
WBMG	West Branch	Dam impoundment in Naperville
EBAT	East Branch	Headwaters of East Branch (Bloomingtondale)
EBCW	East Branch	Dam impoundment on the East Branch
EBBR	East Branch	Butterfield Road and East Branch
EBHL	East Branch	Hidden Lake Forest Preserve outflow from low gradient area
EBHR	East Branch	Hobson Road, immediately downstream of Prentiss Creek
SCBR	Salt Creek	Butterfield Road and Salt Creek
SCFW	Salt Creek	Fullersburg Woods Forest Preserve in the Graue Mill impoundment
SCYR	Salt Creek	Immediately downstream of Graue Mill

Table 1. 2008 DO monitoring locations, DRSCW DO Monitoring Program

(See Attachment 2 DuPage River/Salt Creek Monitoring Sites for a map with the DO monitoring efforts for 2008 with the site code callouts)

The sondes collected hourly data for the following parameters: Dissolved Oxygen (DO), Electrical Conductivity, pH, and water temperature for the ten locations above. Data has been subjected to screening for quality control as outlined under the Quality Assurance Plan agreed on with the IEPA. All data from 2008 has been forwarded to the IEPA.

Chloride Usage Education and Reduction Program Study:

CDM provide an update to their “Chloride Reduction Study” report titled “Chloride Usage Education and Reduction Program” through a presentation at the DRSCWG meeting on February 27, 2008. The presentation is accessible on their website at <http://www.drscw.org/reports.htm> The presentation highlights the effectiveness of monitoring and education fact sheet chloride reduction fact sheet preparation. The chloride reduction fact sheets are downloadable on the DRSCW website.

In addition the workgroup hosted a De-Icing Program Seminar with various chloride reduction topics.

■ B.4 Public Hearing

MEASURABLE GOALS, INCLUDING FREQUENCIES:

As new updates to the DuPage County Stormwater Management Plan are developed there will continue to be public hearings in which the public will have an opportunity to voice their comments.

YEAR 6 SUMMARY MILESTONES:

Complete and address any milestones from Year's (1-5) from first Notice of Intent of the original ILR40 NPDES Phase II permit that have not been implemented for this minimum control measure.

COMPLETED TASKS IN YEAR 6:

IDDE Ordinance Public Review Comment Period:

IDDE Ordinance

DuPage County's municipal separate storm sewer system (MS4) discharge permit requires an operator of a regulated MS4 to develop, implement, and enforce an Illicit Discharge Detection and Elimination (IDDE) program, consisting of several pieces. Principal among these pieces is a prohibition, through an ordinance or other regulatory mechanism, on non-stormwater discharges into the MS4. USEPA recommends that the ordinance include appropriate enforcement procedures and actions, as well. County staff has been working with the municipal engineers, through the Water Quality Stakeholders' Workgroup, to draft an IDDE Ordinance. Following much discussion, both County staff and the involved municipal engineers have finalized the IDDE Ordinance, which was open for the 30-day public comment period. The public comment period was extended from Wednesday, February 4 through Thursday, March 5 2008. The IDDE Ordinance went to Stormwater Committee again in April and then moved to County Board in May. In late May 2009 the IDDE Ordinance was passed by County Board.

The proposed IDDE Ordinance and the public comment response document will be accessible on the following County web site:

http://www.dupageco.org/dec/generic.cfm?doc_id=3415

■ B.5 Volunteer Monitoring

MEASURABLE GOALS, INCLUDING FREQUENCIES:

The volunteer monitoring group will select appropriate sites in all impaired watersheds throughout DuPage County and conduct training through The Conservation Foundation and Chicago Wilderness to make data available through the IDNR INRIN database. This database will hopefully be used to draw correlations and trends on the improvements to the impaired watersheds in DuPage.

YEAR 6 SUMMARY MILESTONES:

Complete and address any milestones from Year's (1-5) from first Notice of Intent of the original ILR40 NPDES Phase II permit that have not been implemented for this minimum control measure.

COMPLETED TASKS IN YEAR 6:

DRSCWG Activities

Volunteer Monitoring

- Chloride – The DRSCW conducted monitoring of ambient chloride levels at six locations in the service area. Hourly conductivity data was collected 24 hours a day from December to March for 2007-8 and 2008-9. Chloride samples collected and compared to conductivity data generated at each site in 2007-8 had shown that conductivity was an excellent indicator of chloride during winter months in local waterways.
- Dissolved Oxygen – Hourly DO was monitored at ten locations in the service area. Additional data sets for pH, temperature and conductivity were also built. All data was collected under a Quality Assurance Plan agreed on with IEPA.

DuPage River C.A.R.E. (Citizens Assessing Regional Ecosystems) Monitoring Program

TCF continues to partner with the RiverWatch Citizen Scientist program to monitor sites in the DuPage River watershed in DuPage County and throughout our service area. The RiverWatch Citizen Scientist program is run by the National Great Rivers Research and Education Center (NGRREC) in Godfrey, Illinois. For the last monitoring period, May 1st through June 30th, 2008, nine sites were monitored by fourteen TCF volunteers. Monitoring results from TCF monitors and the Fox and Kankakee watersheds are included with this report. Please note that NGRREC classifies data from the DuPage River as Fox River watershed. We are working with them to reclassify this.

The NGRREC is now training new monitors. Training for new and returning monitors was hosted by TCF on March 28th, 2009. The overall RiverWatch training schedule was communicated to TCF members through email and a letter was sent to all CARE and River Watch Citizen Scientist monitors from the last three years. Twelve new monitors were trained and several returning monitors attended the refresher training. Monitors are being assigned sites from NGRREC.

In addition to hosting the RiverWatch training course, TCF will serve as an open lab and monitoring kit distributing site for this monitoring season. Monitors can check out supplies to use to monitor their sites. Also, monitors can schedule a time to come to TCF and use microscopes and other equipment to identify their samples.

TCF is in the process of assessing the Center for Watershed Protection sub-watershed manual entitled the "Unified Stream Assessment Manual: A User's Manual" for compatibility with existing monitoring. A separate report will be produced regarding this assessment before the end of the contract date.

C. Illicit Discharge Detection/Elimination

- **C.1 Storm Sewer Map Preparation**
- **C.2 Regulatory Control Program**
- **C.3 Detection/Elimination Prioritization Plan**
- **C.4 Illicit Discharge Tracing Procedures**
- **C.5 Illicit Source Removal Procedures**
- **C.6 Program Evaluation/Assessment**

MEASURABLE GOALS, INCLUDING FREQUENCIES:

Develop illicit discharge detection and elimination procedures with the above working groups that will map all storm sewer outfalls; determine proper procedures to detect illicit discharges as well as procedures for elimination of discharges; possible inclusion in ordinances (where appropriate) to prohibit non-storm water discharges into the storm sewer system and have appropriate enforcement procedures; and evaluation of monitoring procedures.

YEAR 6 MILESTONES:

Complete and address any milestones from Year's (1-5) from first Notice of Intent of the original ILR40 NPDES Phase II permit that have not been implemented for this minimum control measure.

COMPLETED TASKS IN YEAR 6:

Outfall Mapping and Illicit Discharge Monitoring - DuPage County began its initial illicit discharge monitoring program in the summer of 2008. Stormwater Management and Economic Development and Planning staff began canoeing down the mainstem of the West Branch DuPage River and East Branch DuPage River to monitor outfalls for illicit discharges. County staff did not engage in dry-weather monitoring activities until at least 72 hours following a rain event totaling more than 0.1 inches of rain, based on real-time precipitation data provide by the USGS precipitation gage closest to the monitoring sites. Monitoring activities involved locating outfalls, obtaining outfall coordinates using a portable GPS unit, and photographing all outfalls. If flow was detected during dry-weather conditions, potential discharge sources were identified by collecting data for six parameters; pH, temperature, specific conductance, fluoride, ammonia, and surfactants. Monitoring will continue for the remainder of the County's waterways identified using the UGSG NHD, 1:100,000 scale, throughout the duration of the next permit cycle. Discharge data will be used to identify and eliminate illicit discharges as well as to prioritize those areas in need of increased monitoring frequency. 2009 monitoring activities will include mainstem Salt Creek and waterways located in Wayne, Bloomingdale, and Addison Townships.

IDDE SUMMER 2008 MONITORING DATA (DISCHARGING OUTFALLS)

Outfall	Date	Time	pH (SU)	Temperature (C)	Conductivity (uS/cm)	Specific Conductance (uS/cm)	Flouride (mg/L)	Ammonia (mg/L)	Surfactants (mg/L)	Salinity (ppt)	Comment
8495548-0403201	7/18/2008	10:56			1204	1401	0.20	0	0.25	0.7	Flow, Sampled
8548278-0361268	7/17/2008	10:22	7	18.7	1183	1342	0.30	0.04	0.00	0.7	Flow, Sampled
8549244-0553747											
8572165-0348528											
8593982-0342211	7/16/2008		6	22.8	1267	1323	0.40	0.09	0.00	0.6	Flow, Sampled
8601172-0539441											
8620965-0537714											River Bend Golf Course Ponds.
8626958-0277528	7/16/2008	11:12	6.5	18.6	1244	1417	0.35	0	0.25		Flow, Sampled
8646976-0535567											
8688998-0532064											Located on west side of bank.
8718305-0529294	9/2/2008	12:41	9	28.8	1252	1157	0.30	0.16	0.25	0.6	Flow from private pond, high algae content
8908966-0223275	7/15/2008	12:23	6	18.1	744	858	0.35	0.00	0.00	0.4	Flow, Sampled
9127349-0253086											
9174057-0594803	7/29/2008	12:18									Drains Wetland.
9184241-0255857											
9195490-0586406	7/29/2008	11:33									Drains parking lot, no visible flow, moist algae
9203071-0256503											
9230192-0253963											
9234206-0559261	7/29/2008	11:11	6.5	21.9	1457	1552	0.40	0.01	0.00	0.8	Flow, Sampled
9252029-0549756											Flow from private pond.
9304058-0321129											
9332188-0370627											
9336498-0372817											
9336498-0372887											
9338036-0376754											
9344178-0384394											
9360955-0388338											
9361193-0388356											Discharge from pond, 75% submerged
			Mean:	6.8	21.5	1193	1278	0.33	0.04	0.11	0.63
			Median:	6.5	20.3	1244	1323	0.35	0.01	0.00	0.65
			Maximum:	9	28.8	1457	1552	0.4	0.16	0.25	0.8
			Minimum:	6	18.1	744	858	0.2	0.00	0.00	0.4

Note: Not all flowing outfalls were sampled due to several factors; late start of sampling, damage to canoe, and large rain events in September. Those outfalls that were not sampled due to time constraints will be regularly monitored for flow in the upcoming years, at which point they will be sampled if flow exists.

DuPage County IDDE Regulatory Ordinance

DuPage County's municipal separate storm sewer system (MS4) discharge permit requires an operator of a regulated MS4 to develop, implement, and enforce an Illicit Discharge Detection and Elimination (IDDE) program, consisting of several pieces. Principal among these pieces is a prohibition, through an ordinance or other regulatory mechanism, on non-stormwater discharges into the MS4. USEPA recommends that the ordinance include appropriate enforcement procedures and actions, as well. County staff has been working with the municipal engineers, through the Water Quality Stakeholders' Workgroup, to draft an IDDE Ordinance. Following much discussion, both County staff and the involved municipal engineers have finalized the IDDE Ordinance, which was open for the 30-day public comment period. The public comment period was extended from Wednesday, February 4 through Thursday, March 5 2008. The IDDE Ordinance went to Stormwater Committee again in April and then moved to County Board in May. In late May 2009 the IDDE Ordinance was passed by County Board.

The proposed IDDE Ordinance and the public comment response document will be accessible on the following County web site:

http://www.dupageco.org/dec/generic.cfm?doc_id=3415

Solid Waste Events - The 2008 DuPage County Solid Waste and Recycling Annual Report compared the recycling activities of DuPage County and incorporated municipalities against the State's mandate that counties as a collaborative of municipalities, townships and businesses maintain a minimum of a 25% recycling rate. The information collected reflects a mean residential recycling rate of 36%, which includes curbside and multi-family recycling of glass, paper, plastic, bottles, cans, metal and landscaping waste; landscape waste (45,268.19 tons, 12%), recyclables (102,010.75 tons, 27%), and refuse (241,792.72 tons, 71%). Additionally, commercial organizations recycled 7,700.01 tons of the 24,262.20 tons of waste generated, resulting in a commercial recycling rate of 32% of reporting entities' agencies.

National Oceanic and Atmospheric Administration West Branch DuPage River Restoration Projects

✓ **Deep Over Wintering Pool - West Branch DuPage River Restoration**

The project is located on the Roy C. Blackwell Forest Preserve in DuPage County, IL. The project created a deep-water pool habitat ranging from 10 to 15 feet in depth. Aspects of the pool and channel, such as the littoral shelf, limestone slabs, and downed snags, did not previously exist at the project site location. A littoral zone (wetland shelf) within the pool provides deep emergent habitat and structure as a fish nursery for species such as golden shiners, fathead minnows, mosquito fish, central mudminnows, blackstripe topminnows, pumpkinseeds, and green sunfish; native aquatic plant species were planted within this zone. Additional shallow wetlands are located around the pool perimeter, creating microhabitats and seasonally inundated flats, affording a full complement of aquatic and semi aquatic transition to the surrounding landscape. The pool is connected by a channel 10 to 30 feet wide, using natural rock and vegetation for stabilization. To eliminate large non-desirable fish species and allow the pool community assemblage to develop, for the first few years' fish access from the river to the pool is somewhat blocked by an in-stream flow-through boulder structure. Additional habitat variation is found in limestone slabs and overhangs along portions of the pool and channel side slopes; the built-in habitat structures were designed to maximize sheltering and spawning opportunities for fish. Pool water sources include groundwater, overland flow, and floodwaters from the river. Native plants were planted in the fall of 2007 and replanted as needed in the Spring of 2008. Monitoring includes fish species, turbidity, pH, DO and plants diversity. In 2008, in coordination with the Illinois DNR, non-game fish (State T&E as well as species in need of conservation) from other Illinois locations were introduced into the pool. A five-year monitoring and maintenance plan is underway at the project site. Pool excavation and construction activities were coordinated with remedial activities at the adjacent Kerr-McGee Superfund site (the bed and banks of a stretch of the river). Hydric soil was harvested from the site for habitat mitigation activities following removal of contaminated sediments. DuPage County also used removed sediments and woody materials for habitat restoration activities in other County Forest Preserves.

The deep over wintering pool restoration project created approximately 4.8-acre deep pool and wetland area connected to the West Branch DuPage River by a 10 to 30 foot wide

channel. The 10-15 foot deep pool and fringing wetlands will provide over-wintering habitat, spawning, and nursery areas for fish. The construction was completed in August 6, 2007, but some replanting was necessary in the 2008-growing season to meet planting specifications. The plantings were certified by DuPage County on June 26, 2008. The acreage of the restoration habitat pond project will be surveyed in the summer of 2009.



Deep over wintering pool (July 2008)

✓ **Vernal Pool - West Branch DuPage River Restoration**

The project created two vernal pools, each approximately 0.3 acres in size in DuPage County, Illinois on the Roy C. Blackwell Preserve. The goal of the project is to provide specific habitat to meet the needs of species that rely on seasonal or temporary wetlands as part of their life stage development; examples include amphibians (salamanders, frogs, toads). Vernal pools are a rare habitat in DuPage County; many vernal pools have been lost due to human activities, and the remaining pools are often altered due to changes in hydrology (water inputs and outputs) and land use. An extensive monitoring program will evaluate if goals of the project are met. The restoration project was completed on January 6, 2007. Planting occurred in the 2008 growing season and was certified by DuPage County on June 26, 2008. The final pond acreage will be surveyed in the summer of 2009. The pond acreage is expected to be about 0.6 total acres for the two vernal pools.



Vernal Pool (April 2008)



Vernal Pool (south pond April 2008)

- Urban Stream Research Center – West Branch DuPage River Restoration

DuPage County, Illinois proposed to build an Urban Stream Research Facility to help improve the success of urban aquatic habitat restoration, increase the population of native freshwater mussels and non-game fish species, and educate the public about ways to help protect aquatic systems. The overall goal of the project is to build an Urban Stream Research Center (USRC) that will allow the Forest Preserve District of DuPage County to meet its objective to 1) augment the population densities and increase the diversity of freshwater mussel and non-game fish species that are in decline or extirpated in the West Branch DuPage River 2) evaluate the success and impacts of ongoing habitat restoration and remediation projects along the river, 3) improve the success of urban aquatic habitat restoration and enhancement, and 4) provide educational opportunities for the public and other groups. Freshwater mussels, and the non-game fish species that mussels depend on for part of their reproductive cycle, will be reared in the proposed facility. Research activities will include improving the understanding of microhabitat needs for species survival, in order to improve the success of species re-introductions, as well as evaluating the success of habitat restoration techniques in urban aquatic environments. The USRC is located on the Roy C. Blackwell Forest Preserve in DuPage County, Illinois. The West Branch DuPage River and Springbrook Creek, which are urban aquatic systems located adjacent to the USRC, will be key components of the research.

As part of the educational component of the project, DuPage County will incorporate BMPs (Best Management Practices) into the design, and will include educational signs and exhibits regarding the BMP. The goal is to demonstrate ways the public can help protect aquatic systems, for example, a rain garden will show how to reduce the impacts of storm water run-off. The USRC is currently in the planning process. The grantees would like to start construction in summer or early fall of 2009, with a goal of opening the facility in 2010.

- ✓ The County funded nine water quality improvement projects through their Water Quality Improvement Grant Project during the reporting year. The projects are listed below in the table and described in detail thereafter.

Addison Public Library Green Roof Project
Elmhurst College Permeable Paver parking lot Green Residence Hall
Darien Public School District 61 Green Roof Project
Denise Sandoval Porous Walkway
City of Warrenville Permeable Paver Road Reconstruction Phase II and III Project
Conservation Design Forum Design Solution Report Consultant
Bloomington Township Natural Habitat Restoration
Wheaton Park District Northside Park Lagoon Renovation
St. George Retail Center On-Line Detention Pond Retrofit

1) Addison Public Library Green Roof Project, FY08 funded \$20,150.00
 Addison Public Library proposed to construct a new 54,000 sq. ft. library on its village campus. A part of the construction project being proposed is a 5,300 sq. ft. green roof system. "The system is designed to slowly percolate stormwater through the growth medium, reducing

contaminants in and delaying runoff of water from the roof's surface until after the time of peak flow, providing time for the other area stormwater management systems to handle other uncontrolled runoff. In addition to its primary benefits, a green roof system will also help to reduce the cooling load on the building during the summer months and will also extend the life of the roof system below the growth media."

2) Elmhurst College Permeable Paver Parking lot Green Residence Hall, FY08 \$116,525.00
Elmhurst College proposed to redevelop its campus, which included the construction of a 170-bed energy residence hall and a permeable parking lot with green sustainable design features. The new residence hall was constructed as a LEED energy-efficient building. A 100% permeable parking lot, bioswales, native landscapes, rain gardens, several types of runnels to move overflow rainwater aboveground, and cisterns that will capture and recycle rainwater will be incorporated into the sustainable campus BMP design.

3) Darien Lace Elementary Public School Green Roof Water Quality Improvement Project, FY 08 Funded \$90,154.00

Darien Public School's is proposing to construct a partial green roof and rain garden at the Lace Elementary School property in the Darien School District 61 located at 7414 South Cass Avenue in Darien. The Elementary School is located on the corner of 75th Street and South Cass Avenue. District 61 lies within the DuPage River watershed, which crosses approximately 372 square miles in northeast Illinois and includes major portions of DuPage County.

The construction of the Green Roof would allow for numerous environmental educational opportunities such as giving community groups a venue for extending environmental opportunities on the school campus using the Green Roof as an example of green design practices and it will provide a visual demonstration that leads to classroom discussions on water and its importance to maintaining life and the hydrological cycle. District 61 would use this project to extend classroom content and subject matter a variety of grade levels. All grade levels of the Science curriculum will become stronger due to the design and construction of the green roof and rain garden project. The project will provide Lace School's Go-Green! after school environmental club additional opportunities for environmental learning and stewardship, provide an area for students to collect and explore plants that reinforce and enhance classroom learning with hands-on experiences, create a visible environmental green building design example that the community and passers-by can see from 75th Street, and will help the students and community understand how a green roof alleviates Urban Heat Island Effect. The Green Roof project will demonstrate to the Go-Green! students the importance of green roofs in reducing stormwater loads, pollution absorption, ultraviolet radiation exposure from the sun, and insulation properties of the soil and plants. Excess water from the Green Roof will be stored and used by community groups such as the Boy Scouts to continue to redevelop the prairie area on the school campus.

4) Denise Sandoval Porous Walkway Installation Project, FY09 Funded \$556.00

This proposed small water quality best management practice (BMP) project proposal is for the installation of a porous walkway on an existing private single-family home and assistance with funding this green design. The homeowner is proposing to replace their current concrete walkway and construct a BMP porous front walkway in its place. The residential lot is located in

Naperville. The porous walkway will be constructed using standard concrete block pavers with 1-inch crevice through which water can infiltrate into the ground. The walkway will start 6.5 inches from the foundation of the house. The design also includes a future landing made of composite material and an adjacent native perennial and grass garden which will further increase absorption, infiltration and water quality, but is not part of this grant request. The porous walkway will protect the waterways by reducing pollutants from entering into the nearby storm drains. Through changing the land use from an impervious surface to a pervious surface, the pervious walkway will infiltrate rainwater, reduce runoff, help eliminate problems with standing water, provide opportunities for groundwater recharge, and facilitate with pollutant source removal. The construction of the porous walkway in the community may motivate other homeowners to think ecologically when making home improvements and adding curb appeal to their existing homes.

5) City of Warrenville Permeable Paver Road Reconstruction Phase II and III on Warrenville Road, FY08 Funded \$56,175.00

The City of Warrenville is proposing to reconstruct 0.6 miles of Warrenville Road using a permeable paver surface. Stormwater runoff collects in narrow ditches and storm sewers within the road right-of-way and discharges, untreated, through a single culvert directly into the West Branch DuPage River (WBDR). The proposed project will involve the construction of Phases II and III for a three-phased project involving reconstruction of the roadway using a permeable brick surface. The proposed work will begin near the intersection of Warrenville Road and the Illinois Prairie Path, and will extend approximately 0.6 miles east to Curtis Avenue. Phase I is currently under development and includes approximately 0.4 miles of permeable brick paver surface. Phase I is not under consideration for financial assistance has already been completed extending from Curtis Avenue to Behrs Circle Drive. The proposed scope of work involves the removal and excavation of existing asphalt and subgrade material. Existing infrastructure, including stormwater pipe(s), utilities, etc., will be relocated, repaired or replaced as necessary. Stone aggregate will be back-filled and leveled. Concrete edging will be installed for paver support and the permeable pavers will be installed to meet final grade. Primary benefits of the proposed project include a direct benefit to the West Branch DuPage River by reducing the runoff rate and volume contributing to the river and minimizing the potential causes and sources of water quality impairments. The permeable paver road construction will reduce the runoff rate by increasing the travel time it takes for runoff to reach stormwater management facilities and drainage structures.

6) Conservation Design Forum - Design Solution Reports for Future Water Quality Improvement Grant Applicants, FY09 Funded \$10,000.00

The County will further assist small project water quality grant applicants by paying for the conceptual design solution reports for small projects in order to encourage water quality improvement projects on a small scale. Small projects are defined as an isolated private homeowner or a limited grouping of homeowners (maximum limit of four homeowners), and for streambank stabilization projects with a maximum limit of 1,000 linear feet of property. The project must not involve a homeowner association, a corporation or business, a municipality, a non-profit agency or any other public agency to be classified as a small water quality project.

7) Bloomingdale Township Natural Habitat Restoration Project, FY09 Funded \$46,680.00
Bloomingdale Township is proposing to restore a degraded wetland and riparian corridor within the Salt Creek Watershed with native plantings and soil stabilizing vegetation resembling a vegetated filter strip and vegetated swale best management practices on a 3.5-acre township property site at the intersection of Lake Street and N. Rosedale Road in Bloomingdale Unincorporated DuPage County. The goal of this restoration project is to restore, enhance, and maintain its natural resources to improve water quality and foster environmental stewardship. The restoration plan will include the removal of all non-native and or invasive weedy species using methods that does not disturb the natural riparian environment. The low impact hand removal techniques include hand brushing of non-native/weedy trees and shrubs and selective herbicide applications to non-native/weedy herbaceous plants using an aquatic-safe herbicide to relieve the site of harmful weeds prior to native seeding and to treat stumps of non-native shrubs after they are removed. Native seed and plan material will be utilized on the entire site. The native vegetation installed along the creek side in the wet prairie zone will work as a vegetated swale especially during low flow conditions. Native vegetation installed on the floodplain and uplands will filter runoff on its way downstream to the creek. In addition, low impact mulch constructed trails will be located outside of sensitive areas to reduce impervious surfaces on site. The benefits of this restoration project includes long term streambank stability, healthier habitat corridor for both aquatic and terrestrial fauna and flora, a more effective treatment of contaminated road runoff specifically from Lake Street, reduced flood flow rates, velocities and volumes, controlled sediment from upland runoff by filtering nutrients discharged from surrounding upland areas, and continued temperature control for the stream as a result of using native vegetation.

8) Wheaton Park District Northside Park Lagoon Renovation Project, FY09 Funded \$129,927.50

Wheaton Park District proposed project is located within the Winfield Creek watershed tributary to the West Branch DuPage River. The park district is proposing to renovate the lagoon at Northside Park. The proposed renovation plan will correct various types of degradation, which has occurred within the park over time. Problems include the reduction in the depth of the lagoon caused by sedimentation. Other probable sources of contaminants include storm sewers that discharge directly into the lagoon. The scope of work for this lagoon renovation project includes shoreline grading and buffer establishment, sediment bay excavation, storm sewer day lighting, septic field removal, and lagoon aeration. The shoreline grading and buffer will reduce the slopes and create a wetland shelf at or above the new water line of the lagoon. The wetland shelf will be planted with a native wetland mix which will grow into a buffer planting that extends from 26 feet wide to over 100 feet in certain areas. As part of the shoreline grading work, a sediment bay will be excavated at the upstream, northeast corner of the lagoon. The excavation will make it possible for sediment and other debris to drop out of the water and collect rather than filling in the remainder of the lagoon. Some of the benefits of the buffer include improved soil retention, infiltration and nutrient uptake, an increase in biodiversity of plants, decrease in erosion and subsequent sedimentation of the lagoon, decreased fecal matter due to a reduction in geese, an increase in nesting cover for birds, insects and mammals, and enhanced interpretive and recreational environmental amenities for residents. In addition to the shoreline grading, buffer and sediment bay excavation, another component of this project is to

divert the storm sewers currently discharging into the southeast corner of the lagoon to an area that will be converted to a depressional wetland area that will be connected to the lagoon. This storm sewer daylighting process will allow for increased filtration, reduced erosive forces, and filtration of pollutants prior reaching the lagoon. The last two components of the project involve the removal of a septic field and lagoon aeration. The septic field is currently located underneath a Boy Scout cabin in the Park. The Park District is proposing to install a sanitary force main to an existing sanitary sewer line that serves the residential area to the northwest of the island. Installation of this new sanitary line will provide the benefit of eliminating a potential source of pollutants, pathogens and nutrients from leaching into the lagoon. An aeration system will also be installed, which will utilize a compressor located on the Boy Scout campsite to operate five aeration systems throughout the lagoon. Pond aeration benefits provide for greater abundance of fish and prevent fish kills, increases the rate of organic material decomposition through aerobic bacteria break down, improves overall water quality and reduces the susceptibility of the lagoon to algae blooms by reducing available nutrients.

9) St. George Retail Center On-Line Detention Pond Retrofit, FY 09 Funded \$60,947.38

The owner of St. George Retail Center is proposing to eliminate the severe odor caused by insufficient drainage and accumulation of silt in the neighboring detention ponds, restore the drainage functionality of the detention facility and reduce the rate of siltation to prevent the problem from resurfacing. The retail center is located at the southeast corner of the intersection of Ogden Avenue and Royal St. George Drive in the City of Naperville. Cress Creek flows in the northern portion of the site from west to east.

The retail center owner is proposing to retrofit the upper pond. The retrofitted pond will establish a sustainable system capable of supporting a healthy and biological diverse ecosystem. The proposed scope of work and highlights involve the installation of native plants to northeastern Illinois, the isolation and filtration of offsite flows heavily loaded with siltation through the installation of a forebay, reconstruction and re-meandering of the channel, use of manufactured Best Management Practices such as the construction of a Stormceptor or equivalent structure, and a maintenance and monitoring plan. Some of the primary benefits of the proposed project include the creation of native vegetation, such as emergent wet meadow and prairie plantings along the slopes of the pond. Water quality will be improved by blocking out non-native and invasive plant species with native plantings. Native vegetation will assist in the filtration and trapping of sediments, nutrients, and organic matter by reducing the velocity of incoming flows. In addition, the construction of the forebay will intercept soil, capture large sediment particles, prevent sediment accumulation, and help reduce the velocity of the upstream flow under Ogden Road into the upper pond and thereby reducing the erosion within the pond. Through the reconstruction and installation of meanders within the channel the hydrological diversity and flow pattern will be restored to a more natural state. The meandering of the channel will include a profile with pools. At locations where significant flow is present, a Stormceptor or similar manufactured BMP will be constructed. Smaller storm sewers that convey flow from the parking lot will be equipped with sediment traps around the existing parking lot storm sewer drains. Through the use of a Stormceptor and sediment traps non-point source pollution from rainwater will be removed and treated for pollutants such as oil and grit, before transporting any flow into Cress Creek. Manufactured BMP's will also treat total

suspended solids (TSS) regardless of flow rate. The BMP structures are designed to remove a wide range of particle sizes and slow incoming stormwater, which allows free oils and debris to disperse out and sediment to settle. The pollutants will be captured and contained during various rainfall events. The continued maintenance and monitoring of the proposed site improvements will secure that the soil remains stabilized.

- ✓ Waste disposal procedures – DuPage Department of Transportation is requiring disposal of waste from vector and vacuum trucks to be sent to approved landfill sites. The Public Works Department entered into a design contract with an outside contractor to design a Vector Dump Station for the Woodridge Greene Valley Waste Water Treatment Facility originally and complete engineering plans for the preliminary and final design phases and the bidding of the negotiation phase. The design for the Vector Dump Station has not changed, but the location has since moved to the Marian Brooke Underground Maintenance Facility due to accessibility and costs. The Vector Dump Station will be utilized for the proper disposal of Vector waste. The construction of the Dump Station is scheduled to go out to bid in July 2009. The Vector Dump Station is proposed to be constructed by December 2009 and to be operational by the spring of 2010. The Vector Dump Station will service the wastewater treatment DuDOT and County facilities. In time, the dump station will be opened up to the municipalities and the public with an associated fee for its use.
- ✓ DuPage County Public Works Woodridge Wastewater Treatment Facility offered a free recycled Latex Paint pick up service to residents, schools, and community groups. From June 4th through August 17th 2007 the Woodridge Wastewater Treatment Facility collected usable latex pain that was dropped off by residents during designated collection times and inspected, sorted, filtered and then re-blended the paint into five gallon buckets of recycled paint. The end product was a quality-recycled paint available in a variety of colors types and finishes.
- ✓ **DuPage River Salt Creek (DRSCW) TMDL Workgroup** –
Between March 1, 2008 to March 30, 2009 the Workgroup completed or initiated the following:

DuPage River Salt Creek Workgroup Activities 2008

Dissolved Oxygen Monitoring Project:

Stream DO monitoring is in place at the sites listed in Table 1.

Site Code	River	Site Description
WBAD	West Branch	Head waters of West Branch (Hanover Park)
WBMG	West Branch	Dam impoundment in Naperville
EBAT	East Branch	Headwaters of East Branch (Bloomingdale)
EBCW	East Branch	Dam impoundment on the East Branch
EBBR	East Branch	Butterfield Road and East Branch
EBHL	East Branch	Hidden Lake Forest Preserve outflow from low gradient area
EBHR	East Branch	Hobson Road, immediately downstream of Prentiss Creek
SCBR	Salt Creek	Butterfield Road and Salt Creek
SCFW	Salt Creek	Fullersburg Woods Forest Preserve in the Graue Mill impoundment
SCYR	Salt Creek	Immediately downstream of Graue Mill

**Table 1. 2008 DO monitoring locations, DRSCW DO Monitoring Program.
(See Attachment #2 for map with DO site locations)**

The sondes collected hourly data for the following parameters: Dissolved Oxygen (DO), Electrical Conductivity, pH, and water temperature. Data has been subjected to screening for quality control as outlined under the Quality Assurance Plan agreed on with the IEPA. All data from 2008 has been forwarded to the IEPA.

DO Feasibility Study (East Branch of the DuPage River and Salt Creek):

Hourly DO was monitored at ten locations in the service area. Additional data sets for PH, temperature and conductivity were also built. All data was collected under a Quality Assurance Plan Agreed on with IEPA.

Bioassessment Plan:

No sampling was done under the Bioassessment Plan in 2008. Data gathered in 2006 and 2007 was compiled and analyzed.

Chloride Usage Education and Reduction Program Study:

The DRSCW conducted monitoring of ambient chloride levels at six locations in the service area. Hourly conductivity data was collected 24 hours a day from December to March for 2007-8 and 2008-9. Chloride samples collected and compared to conductivity data generated at each site in 2007-8 had shown that conductivity was an excellent indicator of chloride during winter months in local waterways.

- ✓ The County is planning on utilizing CityWorks and linking it with GIS to create a geodatabase to keep track of the outfalls that have been monitored along the three mainstreams and tributaries and any subsequent traces of illicit discharges detected from the outfalls as part of the County's IDDE program.
- ✓ **The Illicit Discharge Detection Elimination (IDDE)** guidance document and plan will provides assistance to communities in formalizing an IDDE program tailored to local needs to satisfy the IDDE NPDES permit requirements. In conjunction with County staff and the IDDE Chapter Workgroup Water Quality Stakeholders a finalized IDDE Ordinance was created for the enforcement to cease illicit discharges. An illicit discharge is defined as any discharge to a municipal separate storm sewer that is not composed entirely of stormwater. Within the County IDDE manual there are objectives of the program, recommendations for completing storm sewer mapping; permit responsibilities, methods for creating a prioritization plan for a completed storm sewer map; an inspection report sheet example; methodology for establishing a field investigation program including dry-weather, outfall/manhole, site, and television inspections; implementing a response program for citizen complaints or incidents; and proper enforcement procedures, and the DuPage County and Municipalities NPDES Notice of Intent. The county is required by federal mandate to implement an Illicit Discharge Detection Elimination program to reduce the discharge of pollutants from its small separate storm sewer system. The Stormwater Management Division has begun the process of cataloguing possible sources of illicit discharge. EarthTech

continued to assist the County with the development of a Technical Guidance Document to supplement the other chapters of our IDDE manual. The Stormwater Management Division has continued to collaborate with Earth Tech to ensure the program developed by County staff is as effective and implementable as possible.

An NPDES IDDE documentation link was created on our County Stormwater website for our cooperating permit holders; (31) municipalities and (9) townships throughout DuPage County and the general public to provide them with valuable information pertaining to Illicit Discharge Detection and Elimination and development of an IDDE program. The link to our website is:

http://www.dupageco.org/dec/generic.cfm?doc_id=3415

- ✓ Through its Water Quality and Environmental Concerns Education Program, the county continues to provide information to the public about best management practices, illicit discharges and ways that businesses and homeowners can conduct themselves to prevent discharges from occurring and reduce runoff into the storm sewer system and waterways; e.g. Stormwater Best Management Practices to Make your Home a Solution to Pollution brochure, Storm Drain Stenciling, Conservation@Home, green building design information, Maintenance and Management of Naturalized Areas, Renewable Energy Resource Program, Guide to Landscape Waste Disposal & Open Burning Rules in DuPage County, Native Landscaping, Shade Gardens, Invasive Species, Butterfly Gardens, Nature Friendly Yard, Rain it's a Natural Resource, Got downspouts? Build a rain garden!, Where does the rain go?, Backyards for Wildlife!, Dump no waste! Drains to river!, Live near a detention pond?, and various electronic newsletters (distributed by SCARCE and The Conservation Foundation).

D. Construction Site Runoff Control

- **D.1 Regulatory Control Program**
- **D.2 Erosion & Sediment Control BMPs**
- **D.4 Site Plan Review Procedures**
- **D.5 Public Information Handling Procedures**
- **D.6 Site Inspection/Enforcement Procedures**

MEASURABLE GOALS, INCLUDING FREQUENCIES:

Review Appendix F and the accompanying Technical Guidance to see that erosion and sediment control best management practices (BMPs) reflect the most current technology available to reduce sediment from leaving the construction site to the Maximum Extent Practicable (MEP) and that water quality objectives are being represented in construction site runoff controls.

YEAR 6 MILESTONES:

Complete and address any milestones from Year's (1-5) from first Notice of Intent of the original ILR40 NPDES Phase II permit that have not been implemented for this minimum control measure.

COMPLETED TASKS IN YEAR 6:

McDowell Grove Dam Modification River Restoration Project

The County began modification of a 3-foot-high dam at McDowell Grove Forest Preserve in Naperville in order to return a portion of the West Branch of the DuPage River to a healthier, more natural waterway. During the first phase of the project, contractors will remove built-up sediments from behind the dam, modify the dam to mimic a more natural stream channel shape, and restore habitat features in the newly free-flowing stream. A sheet-pile wall will be constructed upstream of the dam to divert water so dam modifications can be conducted; it will remain until remaining sediments are safely removed and thorium cleanup is completed as part of the West Branch River Valley Restoration Project in 2010. The completion of this dam-modification project will improve river habitats for fish and wildlife communities, and make recreational boating safer by removing a physical barrier. Further details can be found in the links below.

Project Funding

Funding for the removal is being provided by the DuPage County Division of Stormwater Management through a federal grant, which was sponsored by Sen. Dick Durbin and former Rep. Dennis Hastert and is being administered through the Natural Resources Conservation Service.

- ✓ **BMP manual** - DuPage County completed the BMP technical guidance document (*Appendix E : Technical Guide for Water Quality Best Management Practices*) through utilization of a private consultant. The BMP manual will promote and give guidelines on the installation of vegetated filter strips, vegetated swales, infiltration systems, permeable pavers, manufactured structures, and stormwater detention BMPs such as dry detention basins, wet detention basins, constructed wetland detention basins and underground detention basins. The technical guidance document was approved on April 8, 2008. The DuPage County Countywide Stormwater and Flood Plain Ordinance (DCSFPO) was amended on April 8, 2008 to make water quality best management practices mandatory under most development scenarios. The effective date for the DCSFPO water quality amendments was August 1, 2008.
- ✓ The county issued approximately 37 violation notices for sediment and erosion control violations at construction sites during the reporting year. 87 violations have been resolved and are currently closed.
- ✓ DuPage County permitting staff inspects each permit that is issued at least twice a year. After a Stormwater permit has been issued for a proposed development in DuPage County, staff conducts site inspections to ensure the project has complied with the issued permit. The site must maintain the proper sediment and erosion control throughout the construction period. If sediment and erosion control has not been maintained on a site, or the approved plans are not adhered to, the County will issue a “Red Tag”, which serves as a notification (not really a warning if they are paying a fine) to the developer that they have fourteen working days to resolve the issue and must also pay a \$75 fine. All work must cease until resolution has been achieved. Some EDP inspection staff are issued laptop computers that are equipped with the Govern program, and allows inspectors to verify that on-going work has acquired the

necessary permits. Work completed with out a permit will be issued a “Red Tag” and must be brought into compliance with the most current Stormwater Ordinance standards

- ✓ **ILR10 authority** –The permitting staff at DuPage County performed 311 stormwater permit applications reviews and issued 123 stormwater permit certifications during the NPDES reporting year. The DuPage County Stormwater Ordinance is reflective of the General NPDES IL R10 permit for stormwater discharges from construction site activities for new development one acre or more in size for sediment erosion controls and stormwater pollution prevention.
- ✓ DuPage County Department Economic Development and Planning (EDP) utilizes a database called “Govern” to keep track of permitting information related to wetlands, stormwater management, Public Works, Division of Transportation and Building and Zoning. The Govern database is used to track violations such as wetland, stormwater, or sediment erosion control permitting violations and red tags. All information regarding the permit is stored within Govern, including all reviews, inspections, and complaints. Govern is also used to track pre-application meeting notes, wetland determinations and anything related to property and development. Contractors are required to register with the County to work in DuPage County and Govern is used to keep track of their information.

E. Post-Construction Runoff Control

- **E.2 Regulatory Control Program**
- **E.3 Long Term O&M Procedures**
- **E.4 Pre-Construction Review of BMP Designs**
- **E.5 Site Inspections During Construction**
- **E.6 Post-Construction Inspections**

MEASURABLE GOALS, INCLUDING FREQUENCIES:

Review Appendix F and the accompanying Technical Guidance to see that post-construction BMPs reflect the most current technology available to reduce pollutants from leaving the site to the Maximum Extent Practicable (MEP) and that water quality objectives are being represented in site runoff controls.

YEAR 6 MILESTONES:

Complete and address any milestones from Year’s (1-5) from first Notice of Intent of the original ILR40 NPDES Phase II permit that have not been implemented for this minimum control measure.

COMPLETED TASKS IN YEAR 6:

- ✓ **BMP manual** - DuPage County completed the BMP technical guidance document (*Appendix E : Technical Guide for Water Quality Best Management Practices*) through utilization of a private consultant. The BMP manual will promote and give guidelines on the installation of vegetated filter strips, vegetated swales, infiltration systems, permeable pavers, manufactured

structures, and stormwater detention BMPs such as dry detention basins, wet detention basins, constructed wetland detention basins and underground detention basins.

The technical guidance document was approved on April 8, 2008. The DuPage County Countywide Stormwater and Flood Plain Ordinance (DCSFPO) was amended on April 8, 2008 to make water quality best management practices mandatory under most development scenarios. The effective date for the DCSFPO water quality amendments was August 1, 2008.

The Water Quality Best Management Practices (BMP) Technical Guidance Seminars were held on June 27 and July 11, 2008 in the DuPage County Administration Building Auditorium. The presented material detailed an overview of regulations and BMP manual, manufactured BMPs, native plantings, as well as other topics, such as inspections, maintenance, securities, and easements. Reference materials included with the practices manual were as follows; Stormwater and Flood Plain Ordinance changes, BMP requirements by developer, sample guidelines for calculating partial credit for BMPs, City of Indianapolis manufactured BMP selection guide, DuPage County manufactured BMP checklist, listing of Chicago area BMP maintenance companies, drainage/detention and natural area easement provisions, and sample planning plan and planting performance standards.

Prior to the seminars for municipal staff, consultants, and other interested parties, County staff participated in a “Train the Trainer” event on June 9, 2008, to train staff members in the BMP Manual and associated point system, Ordinance changes, and site design/review considerations. Many of the attendees were asked to help with training at the public sessions. Additionally, the consultant Imbrium offered a presentation to the Development and Economic Planning staff on Manufactured BMP’s in May 2008 prior to the public training sessions. Imbrium provided much of the expertise on manufactured structural BMP’s for the Technical Guidance document and the subsequent training sessions. The general topics of Imbrium presentation include site considerations, types of structures, sizing and modeling and maintenance.

The completed BMP manual as well as the Proposed Ordinance revisions, additional guidance and supporting documentation can be viewed at the following DuPage County website:

http://www.dupageco.org/stormwater/generic.cfm?doc_id=3547

-Springbrook Prairie Wetland Mitigation Project

DuPage County Department of Economic Development and Planning is in the process of constructing a wetland mitigation area at the Springbrook Prairie Forest Preserve in Naperville, IL. When the project is complete, approximately 33-acres of wetland will have been created. Complete funding for this project has been provided by developers that have received a DuPage County stormwater permit to impact wetlands. Major earthwork for the project began November 1, 2008 and is anticipated to be completed by Spring 2009. Native vegetation will be established following completion of the earthwork and will be managed for a period of five years.

During construction, the wetland area will be slightly excavated to create a shallow depression that will hold water for short periods of time following rain events. Drainage tiles that were installed many decades ago for agricultural purposes will be disabled to provide a source of hydrology to the wetland. The mitigation wetland will be planted with a sedge meadow wetland plant community to accommodate habitat requirements for threatened and endangered bird species that currently utilize the forest preserve.

Upon completion of construction, the vegetation will be managed for a minimum of five years to ensure that the planted native species become established throughout the wetland area. Management activities including high mowing, herbicide application, prescribed burning, etc. will be completed to target and eliminate undesirable weedy species. Vegetation management will be scheduled at times to minimize disturbance to the known nesting and foraging habits of the on-site threatened and endangered species.

Additional information regarding this project can be found on the **DuPage County Forest Preserve District** website. <http://www.dupageforest.com/>



Typical sedge meadow wetland.
Photo credit: USFWS/Lacreek NWR

National Oceanic and Atmospheric Administration West Branch DuPage River Restoration Projects

✓ Deep Over Wintering Pool - West Branch DuPage River Restoration

The project is located on the Roy C. Blackwell Forest Preserve in DuPage County, IL. The project created a deep-water pool habitat ranging from 10 to 15 feet in depth. Aspects of the pool and channel, such as the littoral shelf, limestone slabs, and downed previously exists at the project site location. A littoral zone (wetland shelf) within the pool provides deep emergent habitat and structure as a fish nursery for species such as golden shiners, fathead minnows, mosquito fish, central mudminnows, blackstripe topminnows, pumpkinseeds, and green sunfish; native aquatic plant species were planted within this zone. Additional shallow wetlands are located around the pool perimeter, creating microhabitats and seasonally inundated flats, affording a full complement of aquatic and semi aquatic transition to the surrounding landscape. The pool is connected by a channel 10 to 30 feet wide, using natural rock and vegetation for stabilization. To eliminate large non-desirable fish species and allow the pool community assemblage to develop, for the first few years' fish access from the river to the pool is somewhat blocked by an in-stream flow-through boulder structure. Additional habitat variation is found in limestone slabs and overhangs along portions of the pool and channel side slopes; the built-in habitat structures were designed to maximize sheltering and spawning opportunities for fish. Pool water sources include groundwater, overland flow, and floodwaters from the river. Native plants were planted in the fall of 2007 and replanted as needed in the spring of 2008. Monitoring includes fish species, turbidity, pH, DO and plants diversity. In 2008, in coordination with the Illinois DNR, non-game fish (State T&E as well as species in need of conservation) from other Illinois locations were introduced into the pool. A five-year monitoring and maintenance plan is underway at the project site. Pool excavation and construction activities were coordinated with remedial activities at the adjacent Kerr-McGee Superfund site (the bed and banks of a stretch of the river). Hydric soil was harvested from the site for habitat mitigation activities following removal of contaminated sediments. DuPage County also used removed sediments and woody materials for habitat restoration activities in other County Forest Preserves.

The deep over wintering pool restoration project created approximately 4.8-acre deep pool and wetland area connected to the West Branch DuPage River by a 10 to 30 foot wide channel. The 10-15 foot deep pool and fringing wetlands will provide over-wintering habitat, spawning, and nursery areas for fish. The construction was completed in August 6, 2007, but some replanting was necessary in the 2008 growing season to meet planting specifications. The plantings were certified by DuPage County on June 26, 2008. The acreage of the restoration habitat pond project will be surveyed in the summer of 2009.

✓ Vernal Pool - West Branch DuPage River Restoration

The project created two vernal pools, each approximately 0.3 acres in size in DuPage County, Illinois on the Roy C. Blackwell Preserve. The goal of the project is to provide specific habitat to meet the needs of species that rely on seasonal or temporary wetlands as part of their life stage development; examples include amphibians (salamanders, frogs,

toads). Vernal pools are a rare habitat in DuPage County; many vernal pools have been lost due to human activities, and the remaining pools are often altered due to changes in hydrology (water inputs and outputs) and land use. An extensive monitoring program will evaluate if goals of the project are met. The restoration project was completed on January 6, 2007. Planting occurred in the 2008 growing season and was certified by DuPage County on June 26, 2008. The final pond acreage will be surveyed in the summer of 2009. The pond acreage is expected to be about 0.6 total acres for the two vernal pools.

F. Pollution Prevention/Good Housekeeping

- **F.1 Employee Training Program**
- **F.2 Inspection/Maintenance Program**
- **F.4 Municipal Operations Waste Disposal**
- **F.5 Flood Management/Assessment Guidelines**

■ F.1 Employee Training Program

MEASUREABLE GOALS, INCLUDING FREQUENCIES:

A working group comprised of county staff, municipal engineers, DuPage Mayors & Managers Conference, and the Water Quality Stakeholders Working Group will determine proper training procedures on good housekeeping and pollution prevention for appropriate supervisory and/or management employees on: 1) Building and Open Space Maintenance; 2) Vehicle/Fleet Maintenance; 3) Materials Storage and Disposal; 4) Infrastructure Inspection and Maintenance; and 5) Construction and Land Disturbances. Supervisors and/or managers will then provide their employees with the appropriate training/information based on the needs of the facility.

YEAR 6 MILESTONES:

Complete and address any milestones from Year's (1-5) from first Notice of Intent of the original ILR40 NPDES Phase II permit that have not been implemented for this minimum control measure.

COMPLETED TASKS IN YEAR 6:

- ✓ DuPage Department of Transportation (DuDOT) Maintenance, mechanics and grounds staff attended various training workshops during the reporting year such as a Hazardous Awareness (1st responder) course, Hazardous Communication, Miscellaneous Maintenances, Sweeping Debris/Ditching Spoils etc. and Working with Salt/Beet Juice/Calcium Chloride/Snow Plowing Training.
- ✓ Two DuDOT maintenance managerial staff attended a Hazardous Material Disposal Forms, Material Safety Data Sheet, and Hazardous Materials Disposal training classes.
- ✓ The County has moved to towards purchasing Hybrid cars whenever possible for new vehicles.
- ✓ The staff at the county with the assistance of the consulting firm Engineering Resource and Associates ERA, V3 and Imbrium organized two Best Management Practices training

sessions for municipalities, developers, planners and county staff involved with plan preparation and permit reviews to better understand the upcoming revisions that will be made to the County Stormwater Ordinance in regards to Water Quality Best Management Practices for new development. The BMP training sessions were held on June 27 and July 11 2008. There were over 100 attendees at each of these two BMP training workshops. In addition, the county also sponsored a NPDES Phase II good housekeeping pollution prevention workshop for municipalities, townships, inspectors, Division of Transportation and maintenance staff, foreman, machine operators, consultants and developers to provide education and practical awareness on the pollution prevention best management practices on September 12, 2008 at the Oak Meadows Golf and Banquet Hall in Addison. There were over 90 attendees at this workshop. The topics included Pollution Prevention for Municipal Operators, Road Salt Storage, Spill Prevention and Clean up, Landscape Issues, and Native Areas Benefits and Management.

✓ **Wetland Plant Identification Course**

DuPage County hosted this popular course conducted by Dr. Robert Mohlenbrock of Biotic Consultants. The educational hands-on session was held on Sept 29 –Oct.2 2008 and involved the identification and classification of wetland plant species that are important in the delineation of wetlands. The course directly benefits the permitting program by providing necessary training to county staff and has broad participation from local wetland consultants, as well as representatives from both local and federal government agencies. Seven county staff attended the wetland plant identification workshop on alternate days. Three of the seven county staff assisted the instructor Dr. Mohlenbrock during the training session.

- ✓ **DuPage County Board** passed its “Environmental Responsibility and Conservation Policy” in August 2008 to reduce the impact DuPage County has on the environment by recycling waste materials, utilizing resources in an environmentally responsible way and reducing energy consumption. The policies in the handbook state the employees must participate in the office recycling program, double side when making copies and printing, turn off computer and printers at the end of the day and when not in use for 4 hours, unplug charger when not in use, and use public transit opportunities and reduce driving whenever possible.

✓ **DuPage River Salt Creek (DRSCW) TMDL Workgroup – Chloride Usage Education and Reduction Program Study:**

October 16 Chloride Reduction and BMPs for Snow Fighting Deicing Program Seminar: DRSCW co-hosted this workshop with APWA Chicago Metro and DuPage County Division of Stormwater Management. Subjects covered were: Alternative Products, Reducing Chloride Use at DuDOT, Anti-Icing The Experience of Hanover Park, Brewhouse Pre-wet System, Research and Technologies, and Regulations and Water Quality Local Chloride TMDL Analysis. The presentations can be view at the following website:

<http://www.drscw.org/ChlorideReduction.htm>

■ **F.2 Inspection/Maintenance Program**

■ **F.4 Municipal Operations Waste Disposal**

MEASUREABLE GOALS, INCLUDING FREQUENCIES:

A working group will investigate and develop procedures for inspection and maintenance of government-owned stormwater facilities, buildings and grounds, and infrastructure that concentrate on employee training and record keeping. Operation and maintenance procedures should consider: long-term inspection procedures, preventative maintenance, regular maintenance, and schedules for maintenance of: any control that discharges into a separate storm sewer, catch basins, storm drain systems, infiltration devices, detention and retention basins, vegetated swales, buffers, water quality inlets, screens and filters, drainage channels, restored channels and wetlands, dams, reservoirs, and filter strips; buildings and open-spaces; storage and waste disposal areas; highways, roads, streets, bridges, roadside vegetation, runoff control structures, and municipal parking areas; materials at maintenance and storage yards, fleet or maintenance shops, salt and sand storage areas, waste transfer stations, waste collection and recycling areas, and construction sites; snow disposal; litter and dumping controls; construction and land disturbances; and, proper disposal of wastes, accumulated sediments, dredge spoil, sludge, and floatables removed from storm sewers and other management practices. Effective operation and maintenance methods should also consider: operating manuals, spill prevention and cleanup procedures, storm water pollution prevention plans (SWPPP), and inventory and inspection of materials and equipment. Record keeping will document current maintenance activities and schedules.

YEAR 6 MILESTONES:

Complete and address any milestones from Year's (1-5) from first Notice of Intent of the original ILR40 NPDES Phase II permit that have not been implemented for this minimum control measure.

COMPLETED TASKS IN YEAR 6:

- CITYWORKS is a database software program that is utilized to assist in the tracking of work and repairs done to storm sewers, outfalls and utilities within the DuPage County limits. CityWorks enables Public Works, Stormwater, and Drainage Divisions to more efficiently manage field-based assets. One component of this asset-management program will enable the County to map all the storm sewer outfalls as part of its compliance with the illicit discharge detection & elimination component of its NPDES Phase II permit and link the database to Geographical Information System (GIS) outfall maps. The eventual goal is to create a countywide database of all outfall locations and utilize this in the illicit discharge detection and elimination program for storing data.
- Catch basin cleaning equipment, schedule and procedures – DuPage Department of Transportation (DuDOT) owns one tractor truck. DuDOT cleans catch basins approximately once every two years. An outside vendor cleans Stormceptors approximately once every two years.
- Street sweeping equipment, schedule and procedures – DuPage Department of Transportation owns four vacuum trucks and no mechanical sweepers. DuDOT highways are swept approximately three times per year. DuDOT Highway Maintenance has 3 units. Grounds has 1 smaller unit (does complex roads and parking garages 3 times per week)

- Location and pollution prevention measures for material storage - DuDOT keeps salt in a salt dome and the areas surrounding salt storage are routinely kept clean.
- Measures take to control leaks and spills – Oil separator for the gas pumps, garage and maintenance facilities. Media filters are equipped with alarms. Triple basin separators and catch basins are cleaned out by outside vendor 3 times per year.
- Reduction of roadway salt and chloride reduction applications
Super Blend Mix (70% salt brine, 20% sugar beet juice, 10% calcium chloride) applied to roads reduces salt usage on bridges, hills, curbs and two-lane roads.
Sugar beet juice applied to salt reduces salt use and it safer on the roads. The beet juice prevents ice from bonding to the pavement and lowers the eutectic temperature by providing increased melting power.

Non-erosive Calcium Magnesium Acetate (CMA) application mixed with road salt applied to parking garages and parking lots (90% less corrosive). Geo-melt K pre treatment for ground pavements and prevents freezing used in the parking garages.

SNI Solutions Ecosalt deicer treated with an organic melting accelerator used on walkways and roadways. It is 80% less corrosive than regular salt and safer for green spaces and turf.

- Waste disposal procedures through DuPage County Public Works – Waste from vactor and vacuum trucks now must be sent to approved landfill sites.
- Copies of Incidence of Noncompliance (ION)
None
- Emergency numbers for DOT personnel.
Maintenance Department: (630) 407-6920
(between the hours of 6:00 a.m. and 2:30 p.m. Monday-Friday)
DuPage County Sheriff's Dept: (630) 407-2400 (dispatch)
(After the hours of 2:30 p.m. and 6:00 a.m. Monday-Friday & Weekends & Holidays)

DuDOT maintenance yard facility is planning on constructing a permeable paver parking lot in the summer of 2009. V3 was hired as the consultant during the planning and design stages.

DuDOT is working towards developing a comprehensive operational manual for their daily pollution prevention good housekeeping practices.

- ✓ **Waste disposal procedures** – DuPage Department of Transportation is requiring disposal of waste from vactor and vacuum trucks to be sent to approved landfill sites. The Public Works Department entered into a design contract with an outside contractor to design a Vactor Dump Station for the Woodridge Greene Valley Waste Water Treatment Facility originally and complete engineering plans for the preliminary and final design phases and the bidding of the negotiation phase. The design for the Vactor Dump Station has not changed, but the location has since moved to the Marian Brooke

Underground Maintenance Facility due to accessibility and costs. The Vactor Dump Station will be utilized for the proper disposal of Vactor waste. The construction of the Dump Station is scheduled to go out to bid in July 2009. The Vactor Dump Station is proposed to be constructed by December 2009 and to be operational by the spring of 2010. The Vactor Dump Station will service the wastewater treatment DuDOT and County facilities. In time, the dump station will be opened up to the municipalities and the public with an associated fee for its use.

- ✓ DuPage County has an Ordinance in place that prohibits the burning of landscape waste in Unincorporated DuPage County. Under the DuPage County Code it is illegal to dispose landscaped waste such as leaves, shrub and grass clippings and tree limbs. Exceptions to the Ordinance include recreational burning such as barbecues and campfires. The Ordinance was adopted to protect the health, welfare and safety of DuPage County residents as well as to maintain acceptable ambient air quality.
- ✓ The Public Works Drainage Division currently inspects and maintains the Unincorporated MS4 systems on an as-needed complaint basis, which is tracked by a database program called CityWorks. In Year 3 of the new MS4 NPDES Permit Public Works Drainage Division will implement a routine preventive maintenance program for long-term maintenance of the Unincorporated DuPage County MS4 storm sewer system.
- ✓ The DuPage County Division of Transportation (DuDOT's) maintenance fleet vehicles qualify for an IEPA green fleet status due to their consumption of a biodiesel fuel, which are eighty percent diesel and twenty percent corn. DuDOT also uses the Environmental Roadway Design Practice Manuals as a guideline when constructing and improving roadways to incorporate environmental enhancements and promote good stewardship on a case-by-case basis. The new County policy encourages the conversion of County vehicles to an alternate fuel fleet consisting of hybrids, E-85, compressed natural gas and propane fueled vehicles. To accomplish this goal, when the County is scheduled to replace a vehicle with a newer model, it must, when feasible, replace it with an alternate fuel model.
- ✓ DuDOT is currently using, testing and studying the use of an organic deicing super mix of eighty-five percent salt brine, ten percent beet juice and five percent liquid calcium chloride for deicing low-traffic roads, curbs, culverts, bridges, and county parking lots. This super mix of salt brine, beet juice and calcium chloride reduces the amount of salt used thereby protecting the land and aquatic plants, animal life, ground water and eventually the surface water. The beet juice supermix deicer is currently broadcast on the pavement and not the load, but in this upcoming winter the beet juice will be sprayed on the load. 90% of DuDOT's maintenance trucks are equipped to handle the liquid calcium chloride beet juice supermix. DuDOT's highway maintenance trucks are also calibrated to reduce the amount of salt sprayed when deicing. The salt used for deicing is kept in an insulated salt dome and the areas surrounding the salt storage are routinely kept clean.
- ✓ DuDOT regularly recycles their car oil filters and batteries and cremates the remains of the animals found on the roadways.
- ✓ The County co-hosts a yearly hazardous waste collection event with the IEPA to collect items such as cleaning solvents, oil based paints, fertilizers/pesticides, car batteries, automotive fluids, asbestos, and pool chemicals for proper waste disposal. The County has also compiled a Recycling Resource Guide, and other information about household, landscape and solid waste, which is accessible for viewing through the County website at the following link:
http://www.dupageco.org/building/generic.cfm?doc_id=514.

-The 2008 DuPage County Solid Waste and Recycling Annual Report compared the recycling activities of DuPage County and incorporated municipalities against the State's mandate that counties as a collaborative of municipalities, townships and businesses maintain a minimum of a 25% recycling rate. The information collected reflects a mean residential recycling rate of 36%, which includes curbside and multi-family recycling of glass, paper, plastic, bottles, cans, metal and landscaping waste; landscape waste (45,268.19 tons, 12%), recyclables (102,010.75 tons, 27%), and refuse (241,792.72 tons, 71%). Additionally, commercial organizations recycled 7,700.01 tons of the 24,262.20 tons of waste generated, resulting in a commercial recycling rate of 32% of reporting entities' agencies.

In 2008, the County was able to combine the reported commercial recycling with the residential recycling to calculate an overall recycling rate. DuPage County was able to recycle 155,657.30 tons of the 414,012.21 tons of waste generated for a recycling rate of 38%, according to the reported information. DuPage County hosted several special events to contribute to these overall recycling efforts; electronics recycling (53.48 tons) and latex paint recycling (2,590 gallons).

Elmhurst Quarry Stormwater Pump Repairs

Following the significant flood events that occurred in September 2008, December 2008 and February 2009, the County experienced several problems with the stormwater pumps located at the Elmhurst Quarry Flood Control Facility. Engineering contracts were let and construction contracts were bid out to have the submersible stormwater pumps repaired. At this time, the bearings and seals on all 5 pumps have been checked and repaired as needed. Two of the pumps have new impellers and 4 of them have new electric and control cables. Completion of this repair work leaves us with 5 operating stormwater pumps at the Elmhurst Quarry facility (2 in the East Lobe and 3 in the West Lobe). All stormwater from the September 2008, December 2008 and February 2009 events has been evacuated from the facility. Total costs for the engineering and construction contracts to repair the pumps totaled over \$650,000.00.

Flood Control Facilities Routine Maintenance

Routine maintenance is performed at all of DuPage County's flood control facilities. The major facilities have mechanical gates and electrical equipment. The major facilities include the following:

Elmhurst Quarry Flood Control Facility
Wood Dale – Itasca Flood Control Facility
Fawell Dam
Spring Creek Reservoir

Maintenance at these facilities must be performed for many electric and mechanical devices including: moveable sluice gates, pump stations, control buildings, generators, water elevation sensors, video cameras and lighting equipment. In addition, vegetation maintenance and debris removal are also performed at these facilities. Other facilities where the County provides vegetation maintenance, debris removal or stormwater structure maintenance/replacement include:

Meacham Grove Dam & Reservoir
Addison Dam & Pump Station
Lake – Villa Reservoir
Kress Creek Reservoir
Wayne Oaks Dam
Gary Kehoe Reservoir
River – Dumoulin Pump Stations
Crest Road Basin
Dale Road Basin
Country Lakes

During the reporting period, it is estimated that the County spent approximately \$350,000.00 for the routine maintenance of the above listed flood control facilities.

System Upgrades to Remote Monitoring Equipment

The County maintains a Supervisory Control And Data Acquisition (SCADA) system for the remote operation of the County's flood control facilities. The County also maintains a network of rain gages and stream gages throughout the County. The SCADA system and gaging networks utilize radio telemetry and T1 lines as a means of communication. During the reporting period the County purchased several monitoring equipment upgrades for the SCADA system. These upgrades include:

- Purchase of 2 new radios and 2 new antennas for the East and West Lobes of the Elmhurst Quarry.
- Purchase of a new base radio and master antenna for the Elmhurst Quarry.
- Purchase of a new radio, video camera and radar elevation gage for Irving Park Road Bridge.
- Purchase of a new radio, video camera and radar elevation gage for Harger Road Bridge.
- Purchase of a new radio for the Spring Creek Reservoir.
- Purchase of 2 new antennas for the communication between Spring Creek Reservoir and Lake Kadajah Dam.
- Purchase of 4 new computers, one for each of control buildings located at the Elmhurst Quarry, Wood Dale – Itasca Reservoir, Fawell Dam and the DuPage County Offices.

During the reporting period, DuPage County spent approximately \$60,000.00 for the purchase of the above listed equipment.

■ F.5 Flood Management/Assessment Guidelines

MEASURABLE GOALS, INCLUDING FREQUENCIES:

Continue on-going efforts to ease flooding and flood damages to the maximum extent practicable. Review and revise, as needed, Appendix F and other related appendices. Continue to audit non-waiver and partial-waiver municipalities in DuPage County for compliance with Appendix F. Continue as scheduled and track progress of watershed plans, hydrologic and hydraulic models, and FIRM maps updates.

YEAR 6 MILESTONES:

Complete and address any milestones from Year's (1-5) from first Notice of Intent of the original ILR40 NPDES Phase II permit that have not been implemented for this minimum control measure.

COMPLETED TASKS IN YEAR 6:

Floodplain mapping update – DuPage County Regulatory Flood Map

The latest major edition of the RFM is March 10, 2008. There have been five new LOMRs posted to the DuPage Regulatory Flood Map (RFM) since March 10, 2008. The LOMRs were for the following watersheds: unincorporated/Sawmill Creek Tributary #3, unincorporated/(old) Addison Creek Tributary #4, Elmhurst/(new) Addison Creek Tributary #4, Aurora/Waubansee Creek Trib#1

In June of 1999, DuPage County became a Cooperating Technical Partner with the Federal Emergency Management Agency (FEMA). The purpose of this partnership was to modernize the County's floodplain maps and identify specific flood mapping tasks to undertake. One of the County's efforts as a CTP resulted in a Countywide DFIRM that was adopted on December 16, 2004.

In July of 2008, staff submitted an application to FEMA for FY08 CTP funding in the amount of \$2,050,000.00 for the management and production of updated flood hazard maps for DuPage County. DuPage County received notice from FEMA in September that our application was approved for the total amount of \$2,050,000.00.

The FY08 CTP funds identified here are expected to support engineering, mapping and community coordination activities that will be conducted in collaboration with FEMA and other Cooperating Technical Partners. The Illinois State Water Survey, also a FEMA CTP, has been working to correct some deficiencies with the County's current DFIRM and convert the mapping data into FEMA's geodatabase structure. The County will be working closely with the Illinois State Water Survey under this new initiative to merge that work with the additional floodplain maps that will be produced using these grant funds. The County will also assist the State Water Survey in responding to appeals and comments collected through an official appeals process held in accordance with National Flood Insurance Program regulations. The grant is expected to cover a three-year period beginning September 1, 2008 through August 31, 2011.

The following watersheds have been identified for updated or new mapping under this initiative. These watersheds are as follows:

- Salt Creek mainstem, including its tributaries of Spring Brook Creek, Westwood Creek, Sugar Creek, Bronswood Creek, Oak Brook Tributary, Devon Avenue Tributary, and Ginger Creek.
- East Branch mainstem, including its tributaries of Armitage Creek, Swift Meadows, Army Trail Road Tributary, Tributary No. 2, Glencrest Creek, Rott Creek, Lacey Creek, St. Joseph Creek, Prentiss Creek, Crabtree Creek and Willoway Brook.

West Branch tributaries of Steeple Run, Kress Creek and Spring Brook No. 1.
Sawmill Creek and Wards Creek.

September 2008 Flood Event

Operation of DuPage County's Stormwater Management Facilities provided relief for thousands of homeowners and businesses along Salt Creek and the West Branch DuPage River during the heavy rains that occurred between Friday, September 12th and Sunday, September 14th. On September 12th, approximately 0.25" to 0.75" of rain fell throughout the County. On September 13th anywhere from 3.5" to 7.75" of rain fell throughout the County. Finally on September 14th, another 1.25" to 1.50" of rain fell. The 3-Day event totals for several locations were as follows: 6.69" within the Blackwell Forest Preserve in Warrenville, 8.04" in Carol Stream, 7.74" at O'Hare Airport and 9.26" at Wood Dale.

Stormwater Management Division Responsibilities

The DuPage County Stormwater Management Division staff was responsible for the operation of all County owned flood control structures and facilities across the County. Staff was responsible for initiating the operation of flood control gates throughout the flood event. In addition, staff is responsible for all maintenance and repair activities associated with the structures. During this storm event, staff provided the majority of the personnel required for the flood control facilities, and was the primary liaison with DuPage communities with respect to regional food response information. Following the storm event staff conducted operations to draw down floodwater in the structures, and has been providing assessments of damages to the flood control facilities with recommended repairs of these facilities. The Stormwater Management Division provided the following services as a result of this storm event:

- Operations of all DuPage County owned flood control facilities
- Flood forecasting and overall flood response coordination
- Liaison to OEM and area communities during the storm event
- Investigation of flood reports
- Pumping and environmental testing activities required for flood control facilities (post storm event)
- Assessment of damages to flood control facilities due to the flood event
- Repair of flood damaged facilities
- Continued communication and correspondence with FEMA

The expenses incurred by the Stormwater Management Division during this event are related to personnel expenses, vehicle expenses, expenses related to operating flood control facilities and post storm repair expenses of flood control facilities. During this storm event the Stormwater Management Division had 12 employees work overtime hours to provide the needed flood response. These employees were responsible for the continued operation of 3 flood control facilities across DuPage County. The following is a list of all flood control facilities that operated during this event:

Elmhurst Quarry Flood Control Facility

Wood Dale – Itasca Flood Control Facility

Fawell Dam

Spring Creek Reservoir

Meacham Grove Dam & Reservoir

Addison Dam & Pump Station

Lake – Villa Reservoir

Kress Creek Reservoir

Wayne Oaks Dam

Gary Kehoe Reservoir

River – Dumoulin Pump Stations

Crest Road Basin

Dale Road Basin

Country Lakes

As a result of the September 2008 event, many of the DuPage County flood control facilities will require repairs, some substantial, to return to pre-flood conditions. Outside engineering experts have been retained following this storm event to assess the damages to the facilities. Many of these detailed reports have already been submitted to OEM and FEMA for review. A short summary of the County's facility operation and damages determined to date are as follows:

Elmhurst Quarry Flood Control Facility

Staff opened the sluice gate to the Elmhurst Quarry Flood Control Facility at approximately 7:15 am on Saturday (9/13). Salt Creek elevations continued to rise and began spilling over the 140 ft. long fixed weir on 9/13. At this time, the sluice gate was closed while floodwaters spilled over the fixed weir into the Quarry. Stormwater was diverted into the Quarry from Saturday morning until Tuesday morning. The Quarry provided 8,300 ac-ft of stormwater storage for the Salt Creek watershed. The electrical cost associated with pumping the stormwater back to Salt Creek has been estimated at \$260,400.00.

Fawell Dam

The gates at Fawell Dam were lowered per the State approved operating plan at approximately 6:00 am on Saturday 9/13. Lowering the gates from a 10 ft. opening to a 4 ft. opening provides additional storage upstream of the dam within the McDowell Grove Forest Preserve. West Branch elevations continued to rise during the morning of 9/13. The floodgates were opened to a 5 ft. opening at approximately noon on 9/13 when elevations upstream of the dam reached 687.0. The gates were adjusted to a 6 ft. opening at approximately 8:00 am on Sunday, 9/14 as elevations approached 688.0. Staff continued to monitor West Branch elevations and opened the gates to a 7.5 ft opening at approximately 3:00 pm on 9/14 when stream levels reached 689.0. West Branch levels upstream of the dam continued to rise reaching a maximum of 689.75 at approximately 3:00 am on Monday, 9/15. If levels upstream of the dam had continued to rise to elevation 691.0, the floodgates would have been completely re-opened to the 10 ft opening.

Associated with the dam is a saddle dike that runs along the eastern edge of the forest preserve. The dike helps to contain floodwaters on forest preserve property and protects the residential subdivisions located east of the dike. Floodwaters stored against the saddle dike have caused

damages estimated at approximately \$276,000. An additional assessment of the saddle dike is pending that will refine that estimate.

A few residents within the City of Warrenville have expressed concern that the pool upstream of the dam caused flooding of residential and business structures in their community. The United States Geological Survey provided information showing that peak flow rates on the West Branch in Warrenville from the 2008 event significantly exceeded the peak flow rate from the 1996 event. Prior to this event the 1996 event was considered the flood of record with a peak flow rate of 3,470 cfs. The peak flow resulting from the 2008 event was 4,950 cfs, which is almost 1,500 cfs higher than the flood of record. Peak elevations at Warrenville were also over 2 ft higher than the 1996 event. The USGS data is provisional and subject to revision. However, the data demonstrates the severity of the 2008 event.

Wood Dale – Itasca Flood Control Facility

The gates at the Wood Dale – Itasca Reservoir were opened at approximately 10:30 am on Saturday (9/13) allowing stormwater into the reservoir. Operation of this facility continued according to the operation procedure through the remainder of Saturday into Sunday (9/14). By Sunday afternoon the reservoir was completely full. The reservoir provided 1,775 ac-ft of flood storage for the Salt Creek watershed. The electrical cost associated with pumping the stormwater back to Salt Creek has been estimated at \$6,300.00.

During operation of the facility, stormwater began seeping through the berm separating Salt Creek from the reservoir. It is estimated that repairs to the reservoir could cost approximately \$200,000.00. The work will involve the repair of a sand seam at the base of the berm and any required re-vegetation of the reservoir side slopes.

Joint Funding Agreement with the United States Geological Survey

This Joint Funding Agreement (JFA) is part of an on-going program (since 1985) with the United States Geological Survey (USGS) to assist the Stormwater Management Division in implementing the programs recommended in the Stormwater Management Plan that was adopted by the County Board in 1989. The JFA will cover a time period of one year from March 1, 2009 to February 28, 2010. The County's cost share for the above listed services is \$292,903.00. The USGS will contribute \$220,911.00 in cost sharing money through this federal cooperative program.

The USGS will provide the following services as part of this JFA: (1) On-going precipitation and stream flow data collection, (2) Real time flood-warning and simulation system development for Salt Creek and validation with rain gage network operation, (3) FEQ software verification, documentation online, and support, (4) Data requests and development (5) NEXRAD real-time and historic precipitation database and analysis, (6) DuPage County hydrologic data retrieval, archival, and display on the Internet.

*During the major storm events in September 2008, December 2008 and March 2009 Stormwater Management County staff to alleviate the affects of the rising floodwaters and potential damage to properties and public health operated the flood control facilities.

- ✓ The County funded and or maintained the following flood control projects during the reporting year. The ongoing flood control projects are listed below:

Elmhurst Quarry Stormwater Pump Repairs

Following the significant flood events that occurred in September 2008, December 2008 and February 2009, the County experienced several problems with the stormwater pumps located at the Elmhurst Quarry Flood Control Facility. Engineering contracts were let and construction contracts were bid out to have the submersible stormwater pumps repaired. At this time, the bearings and seals on all 5 pumps have been checked and repaired as needed. Two of the pumps have new impellers and 4 of them have new electric and control cables. Completion of this repair work leaves us with 5 operating stormwater pumps at the Elmhurst Quarry facility (2 in the East Lobe and 3 in the West Lobe). All stormwater from the September 2008, December 2008 and February 2009 events has been evacuated from the facility. Total costs for the engineering and construction contracts to repair the pumps totaled over \$650,000.00.

Flood Control Facilities Routine Maintenance

Routine maintenance is performed at all of DuPage County's flood control facilities. The major facilities have mechanical gates and electrical equipment. The major facilities include the following:

Elmhurst Quarry Flood Control Facility
Wood Dale – Itasca Flood Control Facility
Fawell Dam
Spring Creek Reservoir

Maintenance at these facilities must be performed for many electric and mechanical devices including: moveable sluice gates, pump stations, control buildings, generators, water elevation sensors, video cameras and lighting equipment. In addition, vegetation maintenance and debris removal are also performed at these facilities. Other facilities where the County provides vegetation maintenance, debris removal or stormwater structure maintenance/replacement include:

Meacham Grove Dam & Reservoir
Addison Dam & Pump Station
Lake – Villa Reservoir
Kress Creek Reservoir
Wayne Oaks Dam
Gary Kehoe Reservoir
River – Dumoulin Pump Stations
Crest Road Basin

Dale Road Basin
Country Lakes

During the reporting period, it is estimated that the County spent approximately \$350,000.00 for the routine maintenance of the above listed flood control facilities.

System Upgrades to Remote Monitoring Equipment

The County maintains a Supervisory Control And Data Acquisition (SCADA) system for the remote operation of the County's flood control facilities. The County also maintains a network of rain gages and stream gages throughout the County. The SCADA system and gaging networks utilize radio telemetry and T1 lines as a means of communication. During the reporting period the County purchased several monitoring equipment upgrades for the SCADA system. These upgrades include:

- Purchase of 2 new radios and 2 new antennas for the East and West Lobes of the Elmhurst Quarry.
- Purchase of a new base radio and master antenna for the Elmhurst Quarry.
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- Purchase of a new radio, video camera and radar elevation gage for Harger Road Bridge.
- Purchase of a new radio for the Spring Creek Reservoir.
- Purchase of 2 new antennas for the communication between Spring Creek Reservoir and Lake Kadajah Dam.
- Purchase of 4 new computers, one for each of control buildings located at the Elmhurst Quarry, Wood Dale – Itasca Reservoir, Fawell Dam and the DuPage County Offices.

During the reporting period, DuPage County spent approximately \$60,000.00 for the purchase of the above listed equipment.

***City of Warrenville Audit**

In August 2008, Stormwater Committee initiated an audit of Warrenville's stormwater permitting program in response to their request to become a complete waiver community under the DuPage County Countywide Stormwater and FloodPlain Ordinance. County staff and City of Warrenville staff worked together to coordinate the administrative function check and a technical review of several different types of issued permits. The results of the audit are anticipated to be discussed at the March or April Stormwater Committee meeting. An audit breaks down into administrative function check and a technical review of several issued permits. The administrative review includes the implementation and enforcement of items such as requiring permits where appropriate; holding development securities; requiring easements; utilizing and making available floodplain and stormwater related resources (mainly mapping products or files); demonstrating an adequate enforcement program, etc. The technical review consists mainly of reviews of several Stormwater Management Permits issued by the community for compliance with the technical requirements of the Ordinance. Depending on the outcome, the audit is concluded or becomes more comprehensive.

SECTION C: Attach results of information collected and analyzed, including monitoring data, if any, during the reporting period.

Two lakes in DuPage County were monitored as part of the Illinois Environmental Protection Agency’s Volunteer Lake Monitoring Program – SECCHI Monitoring in 2008 coordinated through the Northeastern Illinois Planning Commission/Chicago Metropolitan Agency for Planning for the six-county northeastern Illinois region.

Lake Charles
Lambert Lake

DUPAGE RIVER C.A.R.E. (CITIZENS ASSESSING REGIONAL ECOSYSTEMS) MONITORING PROGRAM

TCF continues to partner with the RiverWatch Citizen Scientist program to monitor sites in the DuPage River watershed in DuPage County and throughout our service area. The RiverWatch Citizen Scientist program is run by the National Great Rivers Research and Education Center (NGRREC) in Godfrey, Illinois. For the last monitoring period, May 1st through June 30th, 2008, nine sites were monitored by fourteen TCF volunteers. Monitoring results from TCF monitors and the Fox and Kankakee watersheds are included with this report. Please note that NGRREC classifies data from the DuPage River as Fox River watershed. We are working with them to reclassify this.

The NGRREC is now training new monitors. Training for new and returning monitors was hosted by TCF on March 28th, 2009. The overall RiverWatch training schedule was communicated to TCF members through email and a letter was sent to all CARE and River Watch Citizen Scientist monitors from the last three years. Twelve new monitors were trained and several returning monitors attended the refresher training. Monitors are being assigned sites from NGRREC.

In addition to hosting the RiverWatch training course, TCF will serve as an open lab and monitoring kit distributing site for this monitoring season. Monitors can check out supplies to use to monitor their sites. Also, monitors can schedule a time to come to TCF and use microscopes and other equipment to identify their samples.

TCF is in the process of assessing the Center for Watershed Protection sub-watershed manual entitled the “Unified Stream Assessment Manual: A User’s Manual” for compatibility with existing monitoring. A separate report will be produced regarding this assessment before the end of the contract date.

DuPage River Salt Creek (DRSCW) TMDL Workgroup – The group is comprised of representatives from wastewater treatment plants, municipalities, IEPA, Forest Preserve District of DuPage County, environmental groups, and other interested parties. Their mission is to bring together a diverse coalition of stakeholders to work together to preserve and enhance water

quality in Salt Creek and the East and West Branches of the DuPage Rivers and their tributaries. The workgroup plans to do this by collecting reliable and viable water quality data, investigating the options to meet water quality standards, and implementing a coordinated effort to install capital improvement projects and best management practices in the watersheds. During the periods March 1, 2008 to March 30, 2009 the Workgroup met 6 times. In addition to these meetings the group also held regular committee meetings tasked to manage specific programs. These committees included the monitoring committee (probe deployment and bioassessment), and the DO committee (tasked with overseeing the contract to research dissolved oxygen impairments on the East Branch and Salt Creek) and individual watershed committees for West Branch, East Branch and Salt Creek. The group’s purpose is to respond to the TMDL’s established by the EPA for Salt Creek and the East Branch waterways by developing a watershed monitoring plan, gathering data, and verifying and evaluating potential remedies to the identified impairments along Salt Creek and the DuPage River.

Between March 1, 2008 to March 30, 2009 the Workgroup completed or initiate the following:

DuPage River Salt Creek Workgroup Activities 2008

Dissolved Oxygen Monitoring Project:

Stream DO monitoring is in place at the sites listed in Table 1.

Site Code	River	Site Description
WBAD	West Branch	Head waters of West Branch (Hanover Park)
WBMG	West Branch	Dam impoundment in Naperville
EBAT	East Branch	Headwaters of East Branch (Bloomingdale)
EBCW	East Branch	Dam impoundment on the East Branch
EBBR	East Branch	Butterfield Road and East Branch
EBHL	East Branch	Hidden Lake Forest Preserve outflow from low gradient area
EBHR	East Branch	Hobson Road, immediately downstream of Prentiss Creek
SCBR	Salt Creek	Butterfield Road and Salt Creek
SCFW	Salt Creek	Fullersburg Woods Forest Preserve in the Graue Mill impoundment
SCYR	Salt Creek	Immediately downstream of Graue Mill

Table 1. 2008 DO monitoring locations, DRSCW DO Monitoring Program. (See Attachment 2 for map of DO sites)

The sondes collected hourly data for the following parameters: Dissolved Oxygen (DO), Electrical Conductivity, ph, and water temperature. Data has been subjected to screening for quality control as outlined under the Quality Assurance Plan agreed on with the IEPA. All data from 2008 has been forwarded to the IEPA.

DO Feasibility Study (East Branch of the DuPage River and Salt Creek):

Hourly DO was monitored at ten locations in the service area (see attachment2). Additional data sets for pH, temperature and conductivity were also built. All data was collected under a Quality Assurance Plan agreed on with IEPA.

Bioassessment Plan:

No sampling was done under the Bioassessment Plan in 2008. Data gathered in 2006 and 2007 was compiled and analyzed.

Chloride Usage Education and Reduction Program Study:

The DRSCW conducted monitoring of ambient chloride levels at six locations in the service area. Hourly conductivity data was collected 24 hours a day from December to March for 2007-8 and 2008-9. Chloride samples collected and compared to conductivity data generated at each site in 2007-8 had shown that conductivity was an excellent indicator of chloride during winter months in local waterways.

Biological and Water Quality Study of the East and West Branches of the DuPage River and Salt Creek Watersheds by MBI Inc: A baseline biological, physical and water chemistry study of the East and West Branches of the Upper DuPage River and Salt Creek was conducted in 2006 and 2007. The report summarizing the findings is available on the Workgroup website. Results will be developed into recommendations for prioritizing improvements in stormwater management and in-stream habitat. The study will be continued, with each subwatershed being revisited on a three year rotating basis to allow the impacts of any habitat or stormwater improvement project to be evaluated.

Stream Dissolved Oxygen Improvement Feasibility Study for Salt Creek and East Branch of the DuPage River: A final report on dissolved oxygen conditions on the East Branch of the DuPage River has been produced. The central recommendation is the removal of the dam at Churchill Woods Forest Preserve (Glen Ellyn and Lombard). The report is available on the Workgroup website

SECTION D: Attach a summary of the stormwater activities you plan to undertake during the next reporting cycle (including an implementation schedule).

The following stormwater activities are planned for year 7 (as stated in the county's updated NOI) from the new NPDES permit effective April 1, 2009. They may include participation from the co-operating permit holders such as the municipalities and township highway districts:

A. PUBLIC EDUCATION AND OUTREACH

■ A.1 Distributed Paper Material

Develop a series of water quality brochures (IDDE), handouts, and informational material. Provide information and resources, including brochures, and informational DVD, and newsletters for planting and maintaining certified properties.

■ A.2 Speaking Engagement

Develop material for public information such as PowerPoint presentations. Contract with The Conservation Foundation to provide community education (in addition to Conservation @ Home) on water quality topics and programs such as "When it Rains, It Drains" and "Don't Muddy the Waters."

■ A.3 Public Service Announcement

DuPage County working through The Conservation Foundation will promote and expand the Storm Drain Stenciling Program. DuPage County will continue to encourage and increase local coordination in communities. Continue outreach to scout organizations and ecology clubs, homeowner associations. Maintain records and generate reports, purchase and distribute supplies. Intern/assistant to coordinate program with staff support.

■ A.4 Community Event

The Conservation Foundation will create a Community Watershed Outreach Program that will develop and distribute a Watershed Program Outreach brochure/flyer, assemble and update a database. An Intern/assistant will be hired to carry out tasks. Continue Participation in the DuPage County Fair and at other County funded organization events.

■ A.5 Classroom Education Material

Continue the development of education materials, and sponsorship of environmental clubs. Review and update classroom education materials as necessary.

■ A.6 Other Public Education

Continue to support programs like Conservation @ Home through The Conservation Foundation, and implement a wetland classroom program with S.C.A.R.C.E. as well as promote other educational opportunities.

B. PUBLIC PARTICIPATION/INVOLVEMENT

■ **B.1 Public Panel**

Continue support of groups like the Environmental Commission that provide opportunities for increasing public knowledge regarding environmental issues.

■ **B.3 Stakeholder Meeting**

Continue support of the Municipal Engineers and Water Quality Stakeholders Groups

■ **B.4 Public Hearing**

Continue to implement updates and review all amendments to appendices of the Stormwater Management Plan. Hold Public hearings as necessary for any ordinance change, watershed plan, or variance.

■ **B.5 Volunteer Monitoring**

Continue support for volunteer monitoring opportunities.

■ **B.6 Program Coordination**

Review stormwater programs and determine where updates are necessary.

■ **B.7 Other Public Involvement**

Continue to provide funding to the water quality and stream maintenance programs. In addition to programs which incorporate public involvement. Continued sponsorship of Wetland Identification Class and continued maintenance of signage at County owned properties. Continue funding for Household Hazardous Waste Program.

C. ILLICIT DISCHARGE DETECTION/ELIMINATION

■ **C.1 Storm Sewer Map Preparation**

Coordinate the exchange of outfall and storm sewer network information. Field inspectors will verify the locations of the outfalls identified during the first permit cycle as they monitor the outfalls for illicit discharge.

■ **C.2 Regulatory Control Program**

Adopt the Countywide Illicit Discharge Detection and Elimination ordinance. Begin coordinating administrative duties each cooperating permit holder is responsible for.

■ **C.3 Detection/Elimination Prioritization Plan**

The prioritization plan will be applied to the existing MS4 outfall database. The results of this plan will be used to set which outfalls will be monitored and when. DuPage County will begin monitoring outfalls that have been identified during the prioritization process.

■ **C.4 Illicit Discharge Tracing Procedures**

Begin monitoring MS4 outfalls. Once illicit discharges are detected, the protocols set forth in the technical guidance chapter will be followed. Review the status of all illicit discharges discovered.

■ **C.5 Illicit Source Removal Procedures**

Begin monitoring MS4 outfalls. Once illicit discharges are detected, the protocols set forth in the technical guidance chapter will be followed. Review the status of all illicit discharges discovered. Enforce the removal of illicit discharges.

■ **C.6 Program Evaluation/Assessment**

Develop a procedure for evaluating the IDDE program.

■ **C.7 Visual Dry Weather Screening**

Begin dry weather screening in the summer of 2009. The screening will begin with the outfalls that have the most potential for illicit discharge.

■ **C.8 Pollutant Field Testing**

Begin dry weather screening in the summer of 2009. Pollutant field-testing will be done when warranted.

D. Construction Site Runoff Control

■ **D.1 Regulatory Control Program**

Adopt the DuPage County Water Quality Best Management Practices Technical Guidance Document (BMP Manual) into Appendix E. Adopt revisions to the Stormwater Ordinance to more clearly require new developments to incorporate permanent BMPs that will treat stormwater runoff. Pursue an agreement with IEPA to review development applications for compliance with Section 401 for water quality certification.

■ **D.2 Erosion & Sediment Control BMPs**

The County would like to conduct a series of presentation and seminars that would educate and guide the municipalities within DuPage County on how to regulate the BMP manual. This would ensure the BMP manual would be regulated consistently countywide.

■ **D.4 Site Plan Review Procedures**

Adopting the DuPage County Water Quality Best Management Practices Technical Manual (BMP Manual) into Appendix E.

■ **D.5 Public Information Handling Procedures**

Adopting the DuPage County Water Quality Best Management Practices Technical Manual (BMP Manual) into Appendix E.

■ **D.6 Site Inspection/Enforcement Procedures**

Ensure staff has proper qualifications to conduct site inspections with respect to sediment and erosion control.

E. Post-Construction Runoff Control

■ **E.2 Regulatory Control Program**

Adopt the DuPage County Water Quality Best Management Practices Technical Guidance Document (BMP Manual) into Appendix E. Adopt revisions to the Stormwater Ordinance to more clearly require BMPs to treat all runoff from new development in DuPage County.

■ **E.3 Long Term O&M Procedures**

Adopt the DuPage County Water Quality Best Management Practices Technical Guidance Document (BMP Manual) into Appendix E. Adopt revisions to the Stormwater Ordinance to more clearly require BMPs to treat all runoff from new development in DuPage County.

■ **E.4 Pre-Const Review of BMP Designs**

Adopting the DuPage County Water Quality Best Management Practices Technical Manual (BMP Manual) into Appendix E.

■ **E.5 Site Inspections During Construction**

Continue to conduct regular site inspections during construction. Conduct staff training on recognizing inappropriate discharge from a construction site.

■ **E.6 Post-Construction Inspections**

Adopt the DuPage County Water Quality Best Management Practices Technical Guidance Document (BMP Manual) into Appendix E. Adopt revisions to the Stormwater Ordinance to more clearly require BMPs to treat all runoff from new development in DuPage County.

F. Pollution Prevention/Good Housekeeping

■ **F.1 Employee Training Program**

A good housekeeping pollution prevention workshop will be conducted by the Conservation Foundation for staff, municipal employees, grounds maintenance and landscaping field staff, and field staff managers that target Public Works and Transportation Departments. Copies of the power point presentation from this good housekeeping training seminar will be distributed through our County website to continue educating staff that does not attend the seminar. It will also provide information to the general public on pollution prevention best management practices. Attendees will be asked to complete a session evaluation as well as submit suggestions for improvements.

■ **F.2 Inspection/Maintenance Program**

Complete Unincorporated Municipal Separate Storm Sewer (MS4) Outfall storm sewer mapping in conjunction with the Illicit Discharge Detection and Elimination component. Improve communications between the DuPage County's Storm Water Management, Public Works Department and Division of Transportation in order to run the good housekeeping pollution prevention program more effectively. Coordinate procedural development recommendations with the water quality stakeholders group and municipal engineers for inspection and maintenance of government-owned stormwater facilities, and buildings and grounds.

■ **F.4 Municipal Operations Waste Disposal**

Improve communications between the DuPage County's Storm Water Management, Public Works Department, and DuPage Division of Transportation to run the good housekeeping pollution prevention program more effectively

■ **F.5 Flood Management/Assessment Guidelines**

BMP: Watershed Plans/Hydraulic Modeling

Years 1-5:

Adoption of the Spring Brook No. 1 Watershed Plan

Adoption of the St. Joseph Creek Watershed Plan

BMP: DPC Stormwater and Flood Plain Ordinance Updates

Years 1-5:

- Adoption of the Best Management Practices Guidance Manual along with the ordinance revisions that are associated with this document.
- Review and revise, as needed, Appendix F and other related appendices.

BMP: Flood Control Projects

Years 1-5:

- Complete Phase II of the River Dumoulin Project
- Construct the Marion Hills/75th Street Basin Project
- Complete the installation of the Country Lakes Golf Course storm inlet to the new storm sewer system.
- Implement the recommendations in the Springbrook Creek Watershed Plan
- Execute contract that will provide for vegetative maintenance and enhancements at many of the County's existing flood control facilities.
- Construct the Busse Woods Dam Modifications Project.
- Construct the other NOAA projects.
- Construct the Huffman Street project in the Steeple Run Watershed.

BMP: Community Audits for compliance with the DPC Countywide Stormwater and Flood Plain Ordinance

Years 1-5: Randomly audit non-waiver, partial-waiver and complete waiver communities again in DuPage County for compliance with Appendix F.

BMP: Floodplain Mapping using HSPF/FEQ/PVSTATS methodology

Years 1-5:

- Salt Creek mainstem and its tributaries including Ginger, Sugar, Oak Brook Tributary, Bronswood Cemetery Tributary, Westwood Creek and Spring Brook.
- Steeple Run Tributary.
- Sawmill Creek Tributary.
- Kress Creek Tributary.
- Spring Brook No. 1 Tributary.
- Armitage Creek Tributary.

BMP: FIRM Updates

Years 1-5: Corrected and updated DFIRM maps will be approved and adopted by FEMA.

SECTION E: The 40 cooperating permit holders listed in the cover letter rely on DuPage County to satisfy some of their permit obligations as applicable.

For the six NPDES MS4 Minimum Control Measures - Best Management Practices

- 1) Public Education and Outreach**
- 2) Public Participation/Involvement**
- 3) Illicit Discharge Detection and Elimination**
- 4) Construction Site Runoff Control**
- 5) Post-Construction Runoff Control**
- 6) Pollution Prevention/Good Housekeeping**

**SECTION F: Attach a list of construction projects that your entity
has paid for during the reporting period.**

DuPage County Projects:

Location/Project Name	Category	Start Date – End Date
Fawell Dam West Branch (project length 73 feet)	Stream Maintenance	April 10, 2008
848-868 York Rd., Bensenville - Unnamed Tributary to Willow Creek (project length 621 feet)	Stream Maintenance	April 30, 2008
317 Indian Drive, Glen Ellyn East Branch (project length 78 feet)	Stream Maintenance	April 30, 2008 to May 1, 2008
2235 River Woods Drive, Naperville West Branch (project length 300 feet)	Stream Maintenance	June 14, 2008
912 Lacey Ave., Lisle St. Joseph Creek (project length 79 feet)	Stream Maintenance	June 21, 2008
15641 Brook Ct, Lisle Glen Crest Creek (project length 140 feet)	Stream Maintenance	June 28, 2008
25334 Hampton Ct, Lombard - Glen Park stream (project length 146 feet)	Stream Maintenance	June 28, 2008
05257 Summit Dr, Winfield - Winfield Creek (project length 301 feet)	Stream Maintenance	June 28, 2008
Wood Dale Rd & Lake St, Addison – Salt Creek (project length 203 feet)	Stream Maintenance	July 19, 2008
Route 83 Crossing, Addison – Salt Creek (project length 123 feet)	Stream Maintenance	July 26, 2008
29W513 Forestview Dr & 25226 Riverside Pkwy, Warrenville – West Branch (project length 251 feet)	Stream Maintenance	August 9, 2008
1225 Orchard Hill, Villa Park – Salt Creek (project length 113 feet)	Stream Maintenance	August 9, 2008
Naperville Pioneer Park – West Branch (project length 4366 feet)	Stream Maintenance	August 9, 2008 and August 11, 2008
Spring Valley Drive, Medinah – Spring Brook Creek (project length 333 feet)	Stream Maintenance	August 11, 2008
Army Trail Rd – East Branch (project length 49 feet)	Stream Maintenance	August 11, 2008
85161 Derby Dr, Naperville - Unnamed Tributary to East Branch (project length 851 feet)	Stream Maintenance	August 12, 2008 and August 13, 2008

Illinois Environmental Protection Agency – Annual Facility Inspection Report – NPDES Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4)

March 2008 – March 2009

Page 76 of 77 – Section F

394 River Bluff Rd, Naperville- West Branch (project length 127 feet)	Stream Maintenance	August 13, 2008
322A Brookdale Dr, Bloomingdale- East Branch (project length 1193 feet)	Stream Maintenance	September 27, 2008
22W386 Juniper Dr, Medinah- Unnamed Tributary to Spring Brook Creek (project length 160 feet)	Stream Maintenance	October 15, 2008
Four Lakes Ave- East Branch (project length 69 feet)	Stream Maintenance	October 16, 2008
Eagle Street Bridge- West Branch (project length 100 feet)	Stream Maintenance	October 17, 2008
Fawell Dam- West Branch (project length 73 feet)	Stream Maintenance	October 29, 2008
Kress Creek, West Chicago- Kress Creek (project length 1531 feet)	Stream Maintenance	November 6, 2008
Elmhurst Quarry- Unnamed Tributary to Salt Creek (project length 8890 feet)	Stream Maintenance	November 21, 2008 and November 22, 2008
822 Redwood Ln, Bartlett- Tributary #2 (project length 293 feet)	Stream Maintenance	December 30, 2008
Thorndale Avenue, Wood Dale- Salt Creek (project length 133 feet)	Stream Maintenance	January 5, 2009
Fawell Dam- West Branch (project length 73 feet)	Stream Maintenance	February 12, 2009
Fawell Dam- West Branch (project length 73 feet)	Stream Maintenance	March 16, 2009
Warrenville Road, Lisle- East Branch (project length 124 feet)	Stream Maintenance	March 16, 2009
21W036 Glen Park Road, Lombard- Glen Park (project length 102 feet)	Stream Maintenance	March 17, 2009
Addison Public Library Green Roof Project	Water Quality	November 30, 2008
Elmhurst College Permeable Paver parking lot Green Residence Hall	Water Quality	November 30, 2009
Darien Public School District 61 Green Roof Project	Water Quality	May - November 30, 2008
Denise Sandoval Porous Walkway	Water Quality	November 30, 2008
City of Warrenville Permeable Paver Road Reconstruction Phase II and III Project	Water Quality	August -November 30, 2009

Illinois Environmental Protection Agency – Annual Facility Inspection Report – NPDES Permit for Stormwater
 Discharges from Municipal Separate Storm Sewer Systems (MS4)
 March 2008 – March 2009
 Page 77 of 77 – Section F

Conservation Design Forum Design Solution Report Consultant	Water Quality	Feb – November 30, 2009
Bloomington Township Natural Habitat Restoration	Water Quality	March 09 – Nov. 2013
Wheaton Park District Northside Park Lagoon Renovation	Water Quality	March 09– Nov. 2013
St. George Retail Center On-Line Detention Pond Retrofit	Water Quality	March 09 – Nov. 2013
Warrenville Road @ Naperville Road Interchange and intersection improvement	DuDOT	Aug 07 – March 09
Army Trail Road, Schmale Road to Regency Drive Widening and resurfacing	DuDOT	March 07- Nov. 09
Midwest Road, 22 nd Street to Butterfield Road, widening & resurfacing	DuDOT	July 08 start date
Gary Avenue, NW corner at Jewel Rd, sidewalk & storm sewer	DuDOT	Sept. 08 – Nov. 08
Prairie Path Structures, Aurora Branch (Springbrook, Ferry Creek, West Branch)	DuDOT	Jan. 07- May 08
59 th Street Bike path, Lee to Springside	DuDOT	July 08 – May 09
91 Street Bike path, E. of Clarendon Hills Road	DuDOT	June 07 – Nov. 08

Additional cooperating permit holders construction project lists and annual reports are attached.