

TIPS NEWS

Technical **I**nnovation and **P**rofessional **S**ervices

TIPS newsletter of highlights, news, and information for the TIPS End User
If you use any TIPS services – this document is for you!!!

TIPS web page: <http://www.tips.osmre.gov>

Table of Contents

<i>TIPS Mobile Computing Initiative</i>	<i>p. 2</i>
<i>TIPS New Web Site</i>	<i>p.. 5</i>
<i>TIPS Geospatial Activities</i>	<i>p. 5</i>
<i>New TIPS Partnership Will Provide</i>	
<i>High – Resolution Aerial Photography</i>	<i>p. 7</i>
<i>TIPS Thermal Camera Helps with PA</i>	
<i>Anthracite Fire Assessment</i>	<i>p. 8</i>
<i>OSM / TIPS Hurricane Rita Relief</i>	<i>p. 10</i>
<i>Training News</i>	<i>p. 12</i>
<i>Software News</i>	<i>p. 15</i>

TIPS Mobile Computing Initiative

TIPS Mobile Computing Team Announces Release of New Generation of Mobile Computing Hardware and Software – *Robert Welsh*

Following the direction provided by the TIPS Steering Committee, and the December 2004 Geospatial Conference attendees, TIPS continues to expand our on-going mobile computing initiative by significantly accelerating delivery of mobile computing technology to our users. A new \$144,000 procurement of hand-held GPS/GIS equipment, ruggedized tablet computers, and sophisticated software and peripherals will enhance the ability of TIPS customers to take geospatial technology and data to the field. The deployment of this technology within the next month will closely follow the TIPS ArcGIS 9.1 distribution. The new deployment implements the TIPS Mobile Computing Team strategy of first prototyping and then selectively adopting new software and mobile devices as core TIPS software and hardware.

TIPS Mobile Computing (MC) Team

The TIPS Mobile Computing Team has been assembled with nationwide members to coordinate and manage the mobile geospatial technology needs of TIPS customers. The team's mission is to research, evaluate, promote and support the use of innovative, effective mobile computing and geospatial technologies to facilitate monitoring and documentation of compliance in the reclamation of SMCRA-

eligible mined lands. The team will provide the knowledge, software, and hardware to make geospatial data and tools available at the point-of-use: the active or abandoned mine site and other affected areas. State-of-the-art mobile and geospatial technologies will be prototyped with TIPS customers to ensure that the most appropriate tools are investigated and provided through TIPS core software/hardware services. MC team participation in conferences, meetings, and workshops will inform the TIPS user community of the most current developments in mobile computing. A workshop is planned for the Billings Symposium in June, 2006. Team course development and training in MC techniques and technology will focus on the practical use of TIPS core MC hardware/software for mining and reclamation applications. The MC team is dedicated to providing the most timely and highest quality support to TIPS users.

MC Team members:

- Alan Boehms (CFO)
- Ken Eltshlager (AR)
- Lou Hamm (WR)
- Min Kim (MCR)
- Len Meier (MCR)
- Lois Uranowski (AR)
- Robert Welsh (WR) – Team Leader

Team goals include:

- Increase use of mobile geospatial technologies among TIPS users;
- Promote feedback on effective mobile technologies from users;
- Increase use of remote sensing imagery on mobile devices;

- Educate the TIPS MC user base on the applications of the technology; and
- Inform the TIPS user community on MC project achievements.

Mobile Computing Hardware and Software (HW/SW) Procurement and Distribution Policy

HW/SW distribution will be prioritized by needs demonstrated through:

- Regular surveys of TIPS users;
- R&D prototype testing programs for TIPS core software inclusion;
- Refresh of obsolete MC technology; and
- Special bureau, state or Tribal high priority project needs.

Procurement and distribution will be coordinated with the NTTT and regional Technical Transfer staff and Field Offices to ensure needs are being met and unnecessary duplication is avoided.

FY06 Additional Procurement and Deployment

The TIPS Service Managers will conduct a survey with users in early 2006 to assess additional needs for mobile computing and other TIPS equipment (i.e. plotters, digitizers, scanners) not met by the FY05 buy. The MC team will develop bundled mobile computing solutions to facilitate ease-of-use for the end user. The survey will provide a description of the recommended bundles. The MC bundles will be grouped as:

1. handheld GPS/GIS devices;



Trimble - GeoXT

2. ruggedized tablet computers with PC card or Bluetooth GPS input; and



3. PDA devices with PC card or Bluetooth GPS.



Trimble Recon



For additional information, please contact Robert Welsh, TIPS Mobile Computing Team Leader, rwelsh@osmre.gov, (303) 844-1400 x1478 or your TIPS Service Manager.

Mobile GIS in KFO – Bill Card

On February 23, 2005 TIPS personnel from OSM Mid-Continent Region (MCR) conducted a Mobile GIS Workshop at OSM's Knoxville Field Office (KFO). Mobile GIS applies the location-finding capability of Global Positioning System (GPS) technology to GIS software and geospatial datasets to allow a user to view their calculated ground position on an interactive map displayed on a portable, hand-held device while navigating across the earth's surface. Len Meier and Kevin Garnett from MCR gave presentations to KFO management and staff during the workshop and also provided hands-on demonstrations of equipment and software functionality at a nearby park.

As a result of this workshop, KFO began efforts to implement use of this technology in the field during pre-mining site visits and regulatory inspections of surface coal mining operations. Inspectors and permit review specialists will be able to use downloaded GIS datasets of proposed mining features such as permit boundaries, earth fill structures, sediment basins, geologic drill hole locations, surface and groundwater monitoring locations and other features on these hand-held devices to make faster and more accurate assessments of the potential impacts of the proposed operation while at the mine site. This technology will result in improving decision-making and reducing response

times between the regulatory authority and the mining industry.

On December 6-8, 2005 TIPS will conduct a Mobile GIS training class at KFO to teach KFO staff how to use ArcPad software and newly purchased mobile GIS equipment.



Len Meier from OSM's Mid-Continent Region holds a tablet computer and demonstrates use of mobile GIS technology during a workshop held at KFO on February 23, 2005. Viewing the interactive map on the tablet are (from left to right around Len) Doug Siddell, Tim Dieringer, Rick Mann, and Fred Klimas. Bill Card is in the background.

For additional information, please contact Bill Card, bcard@osmre.gov, (865) 545-4103 x134.

TIPS New Web Site

TIPS Web Site - *Mary Greene*

The TIPS Web site is under major reconstruction. The new web site will go live in January 2006.

The new site will meet the accessibility requirements of section 508 and new DOI web site requirements of OMB. You will see a user friendly interface and additional features when you visit our new site. Not to worry, the URL is the same.

www.tips.osmre.gov

NEW



TIPS Geospatial Activities

National Surface Mining Geospatial Committee - *Bill Card*

TIPS has established a National Surface Mining Geospatial Committee (NSMGC) to promote development of Geographic Information Systems (GIS) to support the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The overall objective of the Committee is to ensure that scientifically sound geospatial data, spatial information products, technology applications, and services are provided in an efficient and cost effective manner to the SMCRA user community for use in minimizing risk and improving regulatory

decision-making relevant to surface coal mining and reclamation operations.

The committee is a deliberative and advisory body whose members will represent the geospatial interests of OSM, state surface mining regulatory programs, and the states participating in IMCC, WIEB, and NAAML. The committee will identify geospatial technology needs, resources, best practices, and solutions for surface mining regulatory business processes and communicate the results of this work to the SMCRA community.

The committee's work involves:

- Developing a national strategy for implementing and promoting the

use of geospatial technology within the SMCRA community;

- Providing solutions to problems affecting implementation of enterprise GIS; and
- Communicating the results of their work to others.

In FY 2006, the committee plans to meet with state, tribes, and OSM staff to identify their needs. The committee will begin the process of establishing national data standards for two geospatial data layers: permit boundary and underground mining limits. Activities planned for FY 2007 will assess the need for geospatial resources to support all regulatory aspects of mining and reclamation activities and the availability of geospatial information, systems, and expertise.

Committee members consist of geospatial technology experts from within OSM and the state programs. Members represent the geospatial interests of OSM, state surface mining programs, and the states participating in IMCC, WIEB, and NAAML. Current committee members include:

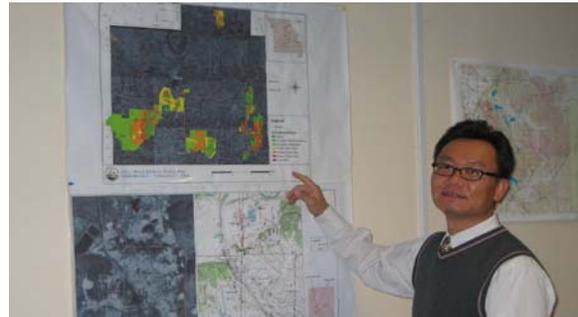
Member	Representing
Bill Card (OSM-AR)	AR & TIPS
Larry Evans (WV)	IMCC
Rick Koehler (NM)	WIEB
Len Meier (OSM-MCR)	MCR & TIPS
Doug Mullins (VA)	NAAML
Steve Parsons (OSM-HQ)	OSM-HQ
Alan Wilhelm (OSM-WR)	WR & TIPS

For further information please contact Bill Card - bcard@osmre.gov , 865-545-4103 x134.

OSM Mid-Continent Region Adds Full Time GIS Specialist

– Len Meier

During summer 2005, the Mid Continent Regional Office (MCR) added a full time GIS Specialist position to the MCR staff. The position was staffed by Kwang Min Kim, a veteran hydrologist in MCR with strong aptitude and interest in GIS work. Many of you already know Min as an instructor for ArcView 3, ArcGIS Spatial Analyst and various OSM hydrology courses. In his new position, Min will



Min showing mine shaft locations in the SW corner of Missouri in the "Tri-state" area.

continue to teach TIPS GIS and related classes while leading the development of geospatial resources in the MCR office, supporting TIPS mobile computing activities, and assisting MCR states to develop and expand their GIS capabilities. Min can be reached at his office in Alton, Illinois at (618) 463-6463, ext. 151, kkim@osmre.gov.

New TIPS Partnership Will Provide High – Resolution Aerial Photography

OSM is Partnering with USDA – Dianne Osborne

TIPS is developing a Memorandum of Understanding (MOU) to partner with the United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) to acquire high resolution aerial photography. This partnership will provide OSM offices, States and Tribes with a streamlined means to acquire small site, high resolution aerial photography.

The NRCS acquires photography annually to gather information on established Natural Resources Inventory (NRI) areas. The NRI is an inventory of land cover and use, soil erosion, prime farmland, wetlands, and other natural resource characteristics on non-Federal rural land in the United States. The NRI program

provides a record of the Nation’s conservation accomplishments and future program needs.

As part of the NRI program aerial photography is collected at standard scales of between 1:4,000 and 1:15,840 with the predominate scale collected at 1:7,920 (1” equals 660 ft.). Under this MOU, OSM offices, States and Tribes can request other scales of photography be flown to meet specific requirements. The period of photography collection is generally March through September.

If you have interest in collecting high resolution aerial photography in your area this season, or if you want additional information, please contact Dianne Osborne at 303-844-1400 ext. 1417 or dosborne@osmre.gov, or your TIPS Service Manager.



Black Mesa, AZ mine site true color aerial photography flown in July 2003.
(Scale of 1:12,000 or 1” = 1,000 feet)

TIPS Thermal Camera Helps with PA Anthracite Fire Assessment

First Report - *Mike Dunn*

In mid-2004, a coal refuse fire was reported to the OSM Wilkes-Barre AML Office. The fire started in processing refuse and is centered at: <http://www.topozone.com/map.asp?z=18&n=4588672&e=452004&size=s&datum=nad83&layer=DRG25>

Wilkes-Barre OSM contained the fire with a cutoff trench but monitoring holes on the “cool side” of the trench showed temperatures were increasing at depth.

The refuse continued to burn, and even though the immediate threat was contained, the temperature readings from some monitoring holes on the “cool” side of the trench were rising, suggesting either the cutoff area wasn't large enough or (everyone's worst nightmare) the fire had spread into abandoned underground mines.

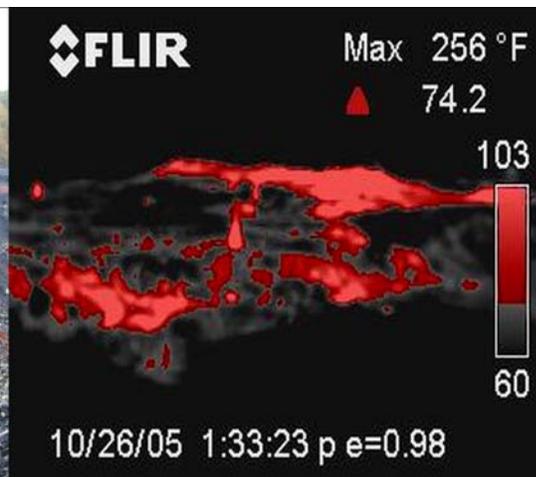
Usually, these remote fires are little more than nuisances – the local VFD occasionally having to extinguish minor brush fires and to restrict site access for safety's sake – and are allowed to run their course. This fire, however, is threatening a 2-year-old sanitary sewer and is triggering severe “fogging” on a 4-lane highway. The fire must be contained and extinguished.



Digging the trench

OSM Pittsburgh technical staff recognized this as an ideal opportunity to test and potentially demonstrate TIPS technology for characterizing site conditions and directing A&E efforts.

Onsite in late October 2005, I used the TIPS FLIR camera to look for rogue “hot spots.” Conditions were almost ideal for daylight “FLIRing” - the past day's 6-inch snow had melted, the sky was still overcast, and a strong, cold wind had dried things out. When I pointed FLIR at the central refuse pile, my first thought was “Holy Dante, Batman!”



Things got more interesting as we compared FLIR images with readings from thermometers and lowcost hand held pyrometers. The spot temperatures were comparable but unlike the FLIR, weren't displayed in context with their

surroundings. I did learn that it's vital to pair a FLIR image with a regular picture of the same scene and something (or somebody!) is needed for reference.



FLIRing back into the woods near the sewer line found several unexpected vents and duff

heating (the negative FLIR image here is easier for a colorblind coworker to interpret).



Monitoring continues and after core drilling and LIDAR photogrammetry, I'll start some serious 3D property and structure modeling. Certainly there will be lots more visits and fine-tuning of field FLIRing – stay tuned!

For additional information about this on-going project, please contact Mike Dunn, OSM Pittsburgh
mldunn@osmre.gov – 412-937-2910.

OSM / TIPS Hurricane Rita Relief - October 11, 2005 to November 9, 2005

OSM Team Effort in Jasper County, Texas - *Mike Benavides*

Mychal Yellowman, Sammy Pugh, LeChelle M. Harris and Mike Benavides made up the core team for the Jasper County/City debris sites. Mychal Yellowman helped organize set up and maintain the Jasper County/City debris site.

Mychal Yellowman explained his role, "As a federal volunteer for the US Army Corps of Engineers, I was deployed to Jasper, TX to provide Quality Assurance (QA) in Hurricane Rita debris removal. I determined the amount of cubic yards that were contained in each truck coming to the dumpsite with the aid of a Quality Control contractor (QC). I monitored debris collection in the city and county to verify that only vegetative debris was collected, no debris was collected on private property, and that all necessary safety equipment was used. I also measured and marked uprooted stumps within the city and county. "

LeChelle M. Harris did the same for the Kirbyville City site. Sammy Pugh did the same for the Buna debris site. The scale of debris hauled to these sites was in the thousands of cubic yards a day. I am extremely proud of all of our OSM staff working under long hours and difficult conditions in Southeast Texas. We had an outstanding safety record at all of our sites. This shows our effort in chasing the debris crews and inspecting them for proper safety equipment, was not in vain.

Let it be known that the need is still great for more volunteers from the Department of the Interior. TIPS tools are not needed now but GIS and computers at every level could be used to speed up all phases of disaster planning, implementation, and organization. Again thanks to all the OSM, USGS, FEMA and ARMY CORP of ENGINEERS folks that made this project go.... For more information, please contact Mike Benavides, mbenavides@osmre.gov, (303) 844-1400 x1482.



Mychal Yellowman (left) is a TIPS Instructor and Course Developer. He is a civil engineer in the Western Region, Program Support Division. Mike Benavides (right) is a Computing Information Specialist in the Western Region, Technical Management Division, IT Operations Branch. Mike serves as the TIPS KeyServer software license monitoring administrator and software manager.

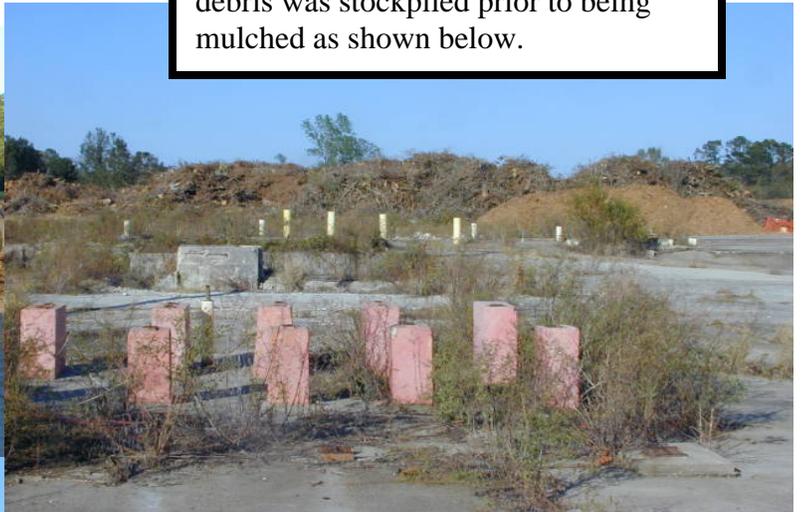


Two photos of the tower built by the EPA in Jasper to determine the volume of the debris loads. Loads ranged from 14 cubic yards to over 100 cubic yards. A typical load was approximately 20 cubic yards.

Debris pile on the side of the road waiting for bees to leave the tree trunk prior to removal.



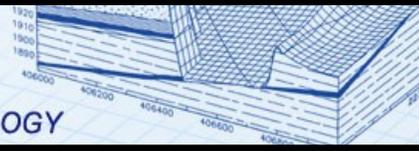
Debris pile over 200 feet tall where the debris was stockpiled prior to being mulched as shown below.



Training News



TRAINING ... AT THE SPEED OF TECHNOLOGY



TIPS Welcomes New Training Staff - *Billie Clark*

TIPS is pleased to announce the addition of two new staff members to support the TIPS Training Program in Denver, Colorado, Dawn Trudeau and Karyn Evans.



Dawn Trudeau is the Administrative Support Specialist for the TIPS Program. She will be working closely with Steve Trujillo, Program Analyst and Karyn Evans, Training Program

Manager. Dawn comes to us from her first federally employed position of three years. She worked for the Department of Labor, Mine Safety and Health Administration, Metal and Nonmetal Rocky Mountain District, located on the Denver Federal Center in Lakewood, Colorado. Previous employers include: Marilyn Hickey Ministries, Englewood, Colorado, Montana Farmers Union and the University of Great Falls in Great Falls, Montana, Homeland Stores (formerly Safeway), Oklahoma City, OK. Dawn graduated in 1995 with a Bachelor's in Management Marketing and a Master's degree from Troy State University in Human Resource Management in 1998. Dawn can be contacted at dtrudeau@osmre.gov 303-844-1400 X1487.

Karyn Evans is the new Training Program Team Leader for the TIPS team in Denver, Colorado. Karyn comes to OSM from the Forest Service -

Rocky Mountain Research Station in Fort Collins, Colorado, where she was a Management Analyst for the Executive Team, facilitating local



and national meetings, and participating in workforce planning analysis. From 1999-2001, Karyn managed the Bureau of Reclamation's Lower Colorado Region Employee Development, Training, and Award programs in Boulder City, Nevada. With over 26 years of federal service experience in four different agencies, Karyn brings a wealth of knowledge and experience to the position relative to program development, analysis and coordination activities, process improvement, and team leader abilities. Karyn has two grown daughters and a grandson living in Nevada, and will soon settle in Broomfield, Colorado with her two miniature schnauzers.

Karyn can be contacted at kevans@osmre.gov, (303) 844-1400 x 1492.

TRAINING TIPS - Karyn

Evans

Training Nominations

Don't forget to submit your 2006 nominations. Please go to the TIPS training website <http://www.tips.osmre.gov/training/index.asp> and browse this year's class list. You won't want to miss the opportunity to enhance your skills this year. The cutoff deadline for submitting nominations to Dawn Trudeau has been extended to Friday, December 16, 2005. For additional information, contact Dawn Trudeau, dtrudeau@osmre.gov, (303) 844-1400, ext.1487.



On-Line Courses

Did you know TIPS currently offers 69 on-line courses and workshops? On-line courses are a great way to obtain cost-effective training at your own pace, as trainees have up to six months to complete the course curriculum. If you are currently enrolled in an on-line course, please check your completion date. If you've completed the course, please fill out the survey. If you have registered for an on-line course but have not started or will not be able to finish by the completion date, please contact Veronika Eskova at (303) 844-1400, ext. 1511.



Two New TIPS Remote Sensing Courses – Dianne Osborne

TIPS will be offering two new remote sensing courses. The new courses are Image Analysis for ArcGIS and Stereo Analyst for ArcGIS. These image processing software extensions are developed by Leica Geosystems and are part of ESRI's ArcGIS. These extensions provide the user with tools to use, transform, analyze, classify, and visualize imagery in a very easy-to-use way.

Image Analysis for ArcGIS

The new Image Analysis for ArcGIS course will teach users how to single frame orthorectify aerial photography as well as satellite imagery. In addition, image enhancement techniques will be covered such as image color balancing and mosaicking. Students will also learn to develop a vegetation classification with different techniques and derive change detection maps from vegetation classifications.



This course is well suited for anyone wishing to incorporate and analyze imagery in their GIS.

Stereo Analyst for ArcGIS

The new Stereo Analyst for ArcGIS class is a follow on course to Image Analysis for ArcGIS. The Stereo Analyst for ArcGIS course will teach users how to create 3D imagery that can be used to visualize, measure and collect reliable feature data from imagery.



Students will learn how to extract highly accurate 3D feature data from imagery, including such features as buildings, roads and pipelines and export these features to a GIS. Students will also learn to transform 2D GIS vectors into 3D GIS data, and automatically attribute spatial information to a GIS.

This course is ideal for users who need to map feature data from images that are highly accurate.

For additional information, please contact Dianne Osborne, dosborne@osmre.gov, (303) 844-1400 x1417.

Training Center Updates and Improvements – *Karyn Evans*

The TIPS Training program is committed to providing state of the art training facilities for our customers. The three training sites in Denver, CO; Alton, IL; and Pittsburgh, PA are on a schedule to receive updated computer equipment to ensure compatibility with the TIPS core software suite to facilitate quality computer training.

Pittsburgh, PA – *Susan Stoyek*

The Pittsburgh training facility has received new computers and new flat panel monitors have been installed. In addition, the power poles have been removed and replaced with floor receptacles and network drops. Twelve (12) students can be trained at this center.

Denver, CO – *Cathy McNish*

The Denver training room features flat panel monitors with their computers. This room received a fresh look with new carpet and fresh paint when the Western Region offices were refurbished. These computers will be the next to be refreshed. This center can train 12 students.

Alton, IL – *Len Meier*

TIPS Upgrades The Mid-Continent Training Facility

The folks at the OSM Mid Continent Regional Office (MCR) upgraded the MCR TIPS Training Facility during 2005. Early in the year, MCR staff installed a new, ceiling mounted, projector to reduce noise and heat disturbance for students. Replacement of the old, table top, projector allowed MCR staff to reconfigure desk space and make room for two additional student work stations which were added in late September.

This increased the student capacity of the training facility to 17, making it the largest of the three TIPS training rooms. The student and instructor chairs were also replaced in September to improve student comfort and maneuverability. MCR also replaced the chairs in the adjoining conference room which adds non-computer seating for an additional 12 attendees to a training room event. The MCR staff and training facilities are now ready to host 2006 courses providing greater comfort and convenience for TIPS students and instructors. For information on use of the training facility by TIPS or any other OSM sponsored event, please contact Len Meier at (618) 463-6463 ext.109.



Kevin Garnett presenting to visitors from the MCR States Meeting in July 2005 in the updated Alton training room.

Software News – Updates and New Software

Software Upgrades Available November 2005

– Mary Greene

The Technical Innovation and Professional Services (TIPS) is pleased to provide you with two Core Software updates:

- ArcGIS 9.1
- XWin32 version 7.0



Upgrade Notes and Highlights

Software Distribution November 2005 –
Mary Greene

ArcGIS 9.1 - 4 CD's

ArcGIS 9.1 will access the *FLEXlm* license monitoring software. This is a minor update to the code that fixes some bugs and enables the software to run more efficiently with fewer errors. It also provides some additional advanced spatial geoprocessing tools. Additional information regarding, “What’s New” is available from the ESRI: <http://www.esri.com/software/arcgis/about/whats-new.html>. There are no changes in the licensing information, the settings for ArcGIS 9.1 from ArcGIS 9.0. For additional information, please contact Alan Wilhelm at awilhelm@osmre.gov (303) 844-1400 ext. 1457.

XWin32 7.0 - 1 CD

XWin32 version 7.0 is an XServer required to run EarthVision in the MS Windows environment. XWin32 provides the graphical environment for EarthVision under Microsoft Windows, XWin32 (sf installation) includes the PUTTY secure shell and other encoding. The help files on the CD will help you to decide whether you need regular XWin32 or XWin32sf. There are no changes in the licensing information as this version uses the exact same license key used for version 6.1.3. For additional information, please contact Mike Dunn at mldunn@osmre.gov (412) 937-2910.

FUTURE SOFTWARE FOR DISTRIBUTION AND AVAILABILITY



TIPS is planning the next distribution in the spring to early summer months of 2006. We anticipate providing you with updates for AquaChem, ArcGIS, AutoDesk products, EarthVision, Galena, GMS, Image Analysis for ArcGIS, Stereo Analyst for ArcGIS. Any additional core software upgrades available at the time will also be distributed. If you have questions concerning how to use the TIPS Core Software, please refer to the TIPS website Software/Hardware Support at: www.tips.osmre.gov.

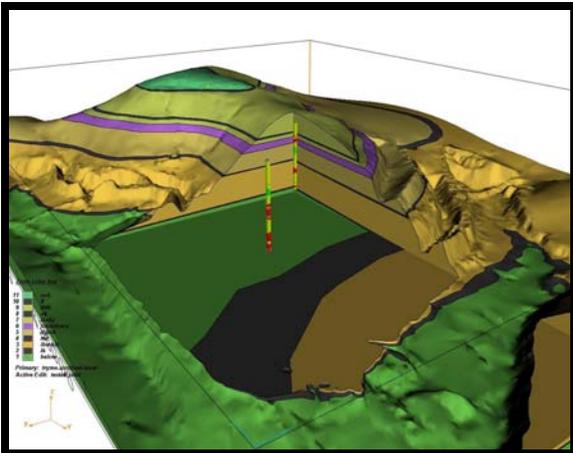
For additional information, contact your Service Manager or Mary Greene, mgreene@osmre.gov, (303) 844-1400 x1438

EarthVision – Nutcracker

– Mike Dunn

The Summer 2005 TIPS Software Distribution included EarthVision 7.5.3 for Windows dated April 6, 2005. You may have trouble installing and/or running EarthVision related to the critical helper application - NUTCracker! Efforts to edit the Registry and/or reinstall will not provide a solution. If you receive a warning message when installing EarthVision, please call or e-mail Mike Dunn with your shipping address to receive a replacement CD.

An upgrade to EarthVision from 7.5.3 to 7.6 is expected within 3 or 4 months.



For additional information on EarthVision, and Nutcracker, please contact Mike Dunn mldunn@osmre.gov or 412-937-2910.

Software Installations

We encourage you to use any TIPS provided software on your individual desktops in the convenience of your own

office! Each software program is commercial software and has been successfully installed and used on computers world-wide.

In our testing we have found a few installation details which can be easily overlooked and may create installation issues.

We have addressed these details in a set of custom installation **instructions** which can be found on the TIPS website www.tips.osmre.gov, then click on the *Software/Hardware Support* link at the top of the page. Once the new TIPS web site is active, you will click on Software on the left menu bar, then click core software, then click the software you desire and scroll to the installation instruction link. You will find it well worth the time to review these instructions carefully before beginning installation. In some cases, your helpdesk or software administrator will be required to actually install the software at your desktop.

Software Help Software Managers are listed on the TIPS website and are available to assist you with software installation problems. You may also contact your TIPS Service Manager.

TIPS Service Managers

Service Managers are listed on the TIPS website for all customers. They are ready to assist you with any questions you have related to TIPS.



(Editor: Mary Greene)