NOTICES OF PUBLIC INFORMATION

Notices of Public Information contain corrections that agencies wish to make to their notices of rulemaking; miscellaneous rulemaking information that does not fit into any other category of notice; and other types of information required by statute to be published in the *Register*. Because of the variety of material that is contained in a Notice of Public Information, the Office of the Secretary of State has not established a specific format for these notices.

NOTICE OF PUBLIC INFORMATION

DEPARTMENT OF ENVIRONMENTAL QUALITY

[M06-288]

1. A.R.S. Title and its heading: 49, The Environment
A.R.S. Chapter and its heading: 2, Water Quality Control
A.R.S. Article and its heading: 2.1, Total Maximum Daily Loads
Section: A.R.S. § 49-234, Total maximum daily loads; implementation plans

2. The public information relating to the listed statute:

Pursuant to A.R.S. § 49-234, the Arizona Department of Environmental Quality (Department or ADEQ) is required to develop a total maximum daily load (TMDL) for navigable waters that are listed as impaired. The purpose of this notice is to publish the Department's determinations of total pollutant loadings for TMDLs in Turkey Creek that the Department intends to submit to the Regional Administrator for Region 9, U.S. Environmental Protection Agency (EPA) for approval.

The Department previously provided public notice and an opportunity for public comment on the draft "Turkey Creek Total Maximum Daily Loads for Copper and Lead" in *The Prescott Daily Courier*, a newspaper of general circulation in the affected area, on April 13, 2006. The public comment period ended on May 12, 2006. The Department only received comments from the Arizona Game and Fish Department. The purpose of this notice is to satisfy A.R.S. §§ 49-234(D) and 49-234(E), which require the Department to publish in the *Arizona Administrative Register* (A.A.R.) the determination of total pollutant loadings that will not result in impairment and the proposed allocations among the contributing sources that are sufficient to achieve the total pollutant loadings.

3. Total Maximum Daily Loads (TMDLs)

A. TMDL Process

A TMDL represents the total load of a pollutant that can be assimilated by a waterbody on a daily basis and still meet the applicable water quality standard. The TMDL can be expressed as the total mass or quantity of a pollutant that can enter the waterbody within a unit of time. In most cases, the TMDL determines the allowable pounds per day of a pollutant and divides it among the various contributors in the watershed as wasteload (i.e., point source discharge) and load (i.e., nonpoint source) allocations. The TMDL must also account for natural background sources and provide a margin of safety. For nonpoint sources such as accelerated erosion or internal nutrient cycling, it may not be feasible or useful to derive a figure in terms of pounds per day. In such cases, a percent reduction in pollutant loading may be proposed. A load analysis may take the form of a phased TMDL, if source reduction or remediation can be better accomplished through an iterative approach.

In Arizona, as in other states, changes in standards or the establishment of site-specific standards are the result of ongoing science-based investigations or changes in toxicity criteria from EPA. Changes in designated uses and standards are part of the surface water standards triennial review process and are subject to public review. Standards are not changed simply to bring the waterbody into compliance, but are based on sound science that includes evaluation of the risk of impact to humans or aquatic and wildlife. Existing uses of the waterbody and natural conditions are considered when standards for specific water segments are established.

These TMDLs meet or exceed the following EPA Region 9 criteria for approval:

Plan to meet State Surface Water Quality Standards: The TMDLs include a study and a plan for the specific pollutants that must be addressed to ensure that applicable water quality standards are attained.

Describe quantified water quality goals, targets, or endpoints: The TMDL must establish numeric endpoints for the water quality standards, including beneficial uses to be protected, as a result of implementing the TMDLs. This often requires an interpretation that clearly describes the linkage(s) between factors impacting water quality standards.

Analyze/account for all sources of pollutants: All significant pollutant sources are described, including the magnitude and location of sources.

Identify pollution reduction goals: The TMDL plan includes pollutant reduction targets for all point and nonpoint sources of pollution.

Describe the linkage between water quality endpoints and pollutants of concern: The TMDLs must explain the relationship between the numeric targets and the pollutants of concern. That is, do the recommended pollutant load allocations exceed the loading capacity of the receiving water?

Develop margin of safety that considers uncertainties, seasonal variations, and critical conditions: The TMDLs must describe how any uncertainties regarding the ability of the plan to meet water quality standards that have been addressed. The plan must consider these issues in its recommended pollution reduction targets.

Provide implementation recommendations for pollutant reduction actions and a monitoring plan: The TMDLs should provide a specific process and schedule for achieving pollutant reduction targets. A monitoring plan should also be included, especially where management actions will be phased in over time and to assess the validity of the pollutant reduction goals.

Include an appropriate level of public involvement in the TMDL process: This is usually met by publishing public notice of the TMDLs in a newspaper of general circulation in the area affected by the study, circulating the TMDLs for public comment, and holding public meetings in local communities. Public involvement must be documented in the state's TMDL submittal to EPA Region 9.

In addition, these TMDLs comply with the public notification requirements of A.R.S. Title 49, Chapter 2, Article 2.1: Publication of these TMDLs in the A.A.R. is required per Arizona Revised Statute, Title 49, Chapter 2, Article 2.1 prior to submission of the TMDL to EPA. The Department shall:

1. Prepare a draft estimate of the total amount of each pollutant that causes impairment from all sources that may be added to a navigable water while still allowing the navigable water to achieve and maintain applicable surface water quality standards, and provide public notice and an opportunity for comment in a newspaper of general circulation in the affected area;
2. Publish a notice in the A.A.R. (this notice) of the determination of total pollutant loadings that will not result in impairment, a summary of comments received to the initial TMDL public notice, and the Department's responses to the comments;
3. Make reasonable and equitable allocations among TMDL sources, and provide public notice and an opportunity for comment in a newspaper of general circulation in the affected area;
4. Publish a notice in the A.A.R. (this notice) of the allocations among contributing sources, along with responses to any comments received on the draft allocations in a newspaper of general circulation.

Federal law only requires the submittal of the pollutant loadings to EPA for approval. However, the Department considers the pollutant loadings and the draft allocations to be integrally related and should be presented together to afford the public a complete understanding of the issues, outcomes and recommendations of the TMDL analysis. For that reason, the Department has combined the loadings and allocations in both the public notice in the local newspaper as well as in this publication in the A.A.R.

B. TMDLs for Turkey Creek

EXECUTIVE SUMMARY

Section 303(d) of the Clean Water Act requires each state to develop TMDLs for surface waters that do not meet and maintain applicable water quality standards. A TMDL establishes the amount of a given pollutant that the waterbody can withstand without creating an impairment of that surface water's designated use. The TMDL by definition (40 Code of Federal Regulations Part 130) is the sum of all point and non-point sources with the inclusion of a margin of safety and natural background considerations.

Turkey Creek is an intermittent stream in the Middle Gila River watershed, central Arizona. The stream has been recognized as impaired by the ADEQ and EPA since the 1992 water quality assessment. The most recent assessment in 2004 listed Turkey Creek as impaired due to cadmium, copper, lead, and zinc exceedances of the acute and chronic aquatic and wildlife- warmwater (A&Ww) and full body contact (FBC) designated uses. The TMDL study was initiated in 2000.

The Turkey Creek watershed lies within the Prescott Mining District. Historic mining in the area was extensive and the watershed contains many abandoned and inactive mine sites of various sizes. Numerous studies have been conducted on the mineral resources and water quality of the region. Several studies have identified the Golden Belt and Golden Turkey mines as sources of metal contamination to Turkey Creek. Both mines are located on land adjacent to the Creek and managed by the United States Forest Service (USFS). USFS recognizes the impacts of these mines sites and has designed reclamation plans and is set to begin on-the-ground improvements once funding has been secured.

Water quality sampling performed by ADEQ and hydrologic modeling by PBJ&S (2004) confirm that the Golden Belt and Golden Turkey mines do contribute to the degradation of water quality in Turkey Creek. Modeled scenarios which included storm events of varying intensity, spatial extent, and discharge indicate that remediation of the sites will improve water quality. There is also a lead load entering the creek above the known mine sites causing exceedances of the FBC standard. Current monitoring data cannot distinguish the lead load as anthropogenic or natural background. Water quality data and modeling results indicate that rain induced runoff is the critical loading condition to Turkey Creek. During large storm events, runoff from the land surface and tailings piles results in elevated flows

containing large volumes of sediment and increased metal concentrations. Steady flows resulting from snow melt do not cause impairments.

Monitoring data and modeling results indicate that cadmium and zinc are not impairing Turkey Creek. Only one zinc and no cadmium exceedances were measured in in-stream samples. Samples collected from direct runoff from the tailings piles contain metal concentrations that are orders of magnitude higher than in-stream samples.

Efforts by the USFS to remediate the Golden Belt and Golden Turkey mines are supported by ADEQ. Additional public participation is encouraged and sought by both ADEQ and USFS. Once on-the-ground improvements have been implemented ADEQ will conduct monitoring to determine the effectiveness of remedial efforts in helping Turkey Creek attain water quality standards.

TMDL CALCULATIONS

The TMDL calculations are based on rain, flow, and concentration simulations developed using the BASINS-HSPF model. The worst case scenario shown by the model occurred when localized rain fell on the tailings piles and immediately upstream of the Golden Turkey and Golden Belt mines. Under this condition, loads from the piles to Turkey Creek were maximized without contributing flow from higher portions of the watershed.

The TMDL or loading capacity and the resulting load reductions necessary to meet the TMDL will be calculated from modeled results using the TMDL equation:

$$TMDL = \sum WLA + LA + MOS$$

Where WLA is waste load allocation (point sources), LA is load allocation (nonpoint sources and natural background), and MOS is a margin of safety. Loading capacity, existing loads, and reductions needed will be calculated at the end of three stream reaches, namely Reaches 23 (at Forest Road (FR) 259 Bridge), 24 (end of Golden Belt and Turkey mining area), and 9 (confluence with Poland Creek). These three sites are used to represent the loads from the upper watershed, known mining influences, and loads exiting the watershed.

A complicating factor is the concentrations and loads upstream of the main mine waste sites consist of both true background and other residual mining activity. At this point it is not known how much of the metals in runoff are natural and how much are a result of anthropogenic activities. More research on this topic is planned by ADEQ. In the meantime it is assumed that for total lead (Pb(t)) and copper (Cu(t)) the natural background concentrations are the laboratory reporting levels, and for dissolved copper (Cu(d)) the concentrations in Reach 23 reflect the natural background.

MARGIN OF SAFETY

The purpose of a MOS is to provide for uncertainty in the calculations. Dilks and Freedman (2004) reviewed the subject of MOS determination. They cite the National Research Council's (2001) review of the TMDL program that concluded that there was a lack of consistency and rigor in current approaches and noted the need for explicit uncertainty analysis in the MOS determination.

Analysis of uncertainty is an essential step. In this case there is a substantial pool of data collected by the ADEQ, and the model appears to provide a reasonably accurate representation of the processes and agreement with field data. The basic information and source of the problem (the tailings piles) is also known with a reasonable degree of certainty. There still is substantial uncertainty in:

- the events themselves—rains are variable in timing and location that can make large differences in stream concentrations,
- how selected events are to be related to specific criteria,
- how the flows are to be related to loads with short-term runoff events,
- the time required for tailings-related particulate lead to get out of the system.

The Arizona Department of Health Services has confirmed the precision of their measurements to be plus or minus 5%. An additional 15% MOS will be applied to account for variable field conditions and model decisions. Variability in field conditions include sampling occurring under drought conditions, the use of autosamplers, grab sample techniques and manual discharge measurements. Modeling decisions that necessitate using a MOS include lack of rain records in the watershed that relate to flow measurements, use of default values, and inability to directly model the chemical and hydrologic processes taking place in and on the tailings piles. Therefore, an explicit MOS of 20% will be applied to the TMDL calculations.

WASTE LOAD ALLOCATIONS

There are no known permitted discharges (point sources) located within the Turkey Creek watershed. Therefore, the WLA variable will be assigned a value of zero in the TMDL equation.

LOAD ALLOCATIONS

Nonpoint source contributions from the watershed may come from either natural background conditions or anthropogenic sources (i.e. mining). LAs will be calculated for these sources; however, not enough data is available to determine the difference between natural background concentrations and anthropogenic sources above and below the known mining area. The two known mining sources within the watershed that have been identified are the Golden Turkey and Golden Belt mines. There are likely many smaller operations located throughout the watershed that potentially contribute to the loading of metals to Turkey Creek but simply have not been located. It should be noted that if in the future LA are determined to result from point sources they will become WLAs.

LOAD REDUCTIONS

Load Reductions (LR) are needed when the existing load is larger than the LA calculated using the TMDL equation. The LR can be calculated by:

LR = Existing load – LA

The percent reduction needed is calculated by using:

% Reduction = (LR/Existing Load) * 100

In cases where the LR is negative, no reduction is necessary. In instances where the inclusion of the margin MOS causes existing loads to exceed the loading capacity a reduction in the existing load will still be required.

TURKEY CREEK TMDLS

TMDLs identify the amount of pollutant that can be assimilated by the waterbody and still meet water quality standards. The pollutants of concern requiring TMDLs for Turkey Creek are copper and lead. Tables 1 through 5 summarize the TMDL calculations for Reaches 23, 24, and 9, respectively. Tables 1 and 2 were calculated using the average flow and mean concentration for each flow event using the model results for rain over the watersheds of Reaches 16, 23, and 24. Cu(d) limits where calculated using the chronic A&Ww standard with an average hardness of 141 milligrams per liter (mg/L). In order to calculate the load in grams per day (g/day) from discharge in cubic feet per second (cfs) and concentrations in mg/L a conversion factor needed to be calculated:

$ft^3/sec * 28.32L/ft^3 * 86400sec/day * mg/L * g/1000mg = 2447g/day$

The conversion factor of 2447 g/day was used in the following equation:

Existing Load = Q * [metal] * 2447g/day

Table 1 shows that loading of Pb(t) is occurring in the watershed above the FR 259 bridge. Above the three month return interval flow (2.3 cfs), the Full Body Contact (FBC) standard of 0.015 mg/L is expected to be exceeded. Lead has a high specific gravity and readily settles out of the water column in flows that do not have enough energy to keep particles suspended. Sampling results indicate that exceedances of the Pb(t) standard occur at the sample site located above FR 93 but not at the next upstream sample site located above Bear Creek. Tributaries located between these two sites include several unnamed streams and Wolf and Bear Creeks.

Unidentified mining sources may be contributing lead to Turkey Creek during runoff events. The watershed contains many historic mining districts that are known to have contained lead bearing accessory minerals. Insufficient data has been collected to determine what percentage of the lead load observed above FR 259 is naturally occurring or resulting from anthropogenic activities. Further, targeted sampling, will be needed to determine the source of lead to Turkey Creek above the FR 259 bridge. Both total and dissolved copper results indicate that surface water standards are being met under all flow regimes above FR 259.

Table 1. TMDLs for Reach 23 with rainfall over Reaches 16, 23, and 24

Metal	Return Interval (yr)	Avg Flow (cfs)	Existing load (g/day)	LA (g/day)	MOS (g/day)	TMDL (g/day)	% Reduction
Total Pb	0.25	2.3	28	67	17	84	0
	0.5	4.4	172	129	32	161	25
	1	7.9	909	231	58	289	75
	2	11.1	2499	325	81	406	87
	5	22.2	10702	650	163	813	94
	10	32.4	11972	949	237	1186	92
	25	47.6	16074	1394	348	1742	91
	50	60.7	19903	1777	444	2222	91
	100	75	25143	2196	549	2745	91

Total Cu	0.25	2.3	158	2245	561	2806	0
	0.5	4.4	829	4294	1074	5368	0
	1	7.9	3383	7710	1928	9638	0
	2	11.1	7877	10834	2708	13542	0
	5	22.2	26564	21667	5417	27084	0
	10	32.4	27828	31622	7906	39528	0
	25	47.6	33895	46458	11614	58072	0
	50	60.7	39361	59243	14811	74054	0
	100	75	47533	73200	18300	91500	0
Dissolved Cu	0.25	2.3	17	54	13	67	0
	0.5	4.4	43	103	26	129	0
	1	7.9	116	185	46	231	0
	2	11.1	163	260	65	325	0
	5	22.2	326	520	130	650	0
	10	32.4	555	759	190	948	0
	25	47.6	815	1115	279	1393	0
	50	60.7	1040	1422	355	1777	0
	100	75	1101	1757	439	2196	0

The effects of rain on tailings piles of the Golden Belt and Golden Turkey mines can be seen when loads are calculated for Reach 24 (Table 2). Loads for both copper and lead increase significantly, exceeding water quality standards during all modeled flows. The only exception is lead at the three month return (3.1 cfs) interval meeting standards.

Table 2. TMDLs for Reach 24 with rainfall over Reaches 16, 23, and 24

Metal	Return Interval (yr)	Avg Flow (cfs)	Existing load (g/day)	LA (g/day)	MOS (g/day)	TMDL (g/day)	% Reduction
Total Pb	0.25	3.1	91	91	23	113	0
	0.5	5.9	491	173	43	216	65
	1	10.4	2138	305	76	381	86
	2	14.7	5288	430	108	538	92
	5	29.4	20360	861	215	1076	96
	10	43	24937	1259	315	1574	95
	25	63.1	33660	1848	462	2309	95
	50	80.5	42548	2357	589	2946	94
	100	99.3	52971	2908	727	3634	95

Total Cu	0.25	3.1	3451	3026	756	3782	12
	0.5	5.9	6872	5758	1440	7198	16
	1	10.4	14048	10150	2538	12688	28
	2	14.7	24208	14347	3587	17934	41
	5	29.4	68992	28694	7174	35868	58
	10	43	84598	41968	10492	52460	50
	25	63.1	113334	61586	15396	76982	46
	50	80.5	143995	78568	19642	98210	45
	100	99.3	175437	96917	24229	121146	45
Dissolved Cu	0.25	3.1	2625	85	21	106	97
	0.5	5.9	3811	161	40	202	96
	1	10.4	5421	264	66	330	95
	2	14.7	6906	373	93	466	95
	5	29.4	10863	746	187	933	93
	10	43	12732	1091	273	1364	91
	25	63.1	20999	1478	370	1848	93
	50	80.5	32108	1886	471	2357	94
	100	99.3	44953	2326	582	2908	95

Tables 1 and 2 show the effects of localized rain occurring over Reaches 16, 23, and 24, under this scenario, flow in Turkey Creek continues to the confluence with Poland Creek without any contributions from Reach 9. The loads calculated for the mouth of Turkey Creek are, therefore, the loads coming from Reach 24 and the small changes in the modeled numbers are due to natural attenuation, see table 3.

Table 3. TMDLs for Reach 9 with rainfall over Reaches 16, 23, 24

Metal	Return Interval (yr)	Avg Flow (cfs)	Existing load (g/day)	LA (g/day)	MOS (g/day)	TMDL (g/day)	% Reduction
Total Pb	0.25	3	88	88	22	110	0
	0.5	5.7	321	167	42	209	48
	1	10.2	1597	299	75	374	81
	2	14.7	4856	432	108	540	91
	10	42.5	28807	1248	312	1560	96
	100	98.5	69658	2892	723	3615	96

Total Cu	0.25	3	2973	2937	734	3671	1
	0.5	5.7	5998	5579	1395	6974	7
	1	10.2	13428	9984	2496	12480	26
	2	14.7	25539	14389	3597	17986	44
	10	42.5	89022	41600	10400	52000	53
	100	98.5	179326	96412	24103	120515	46
Dissolved Cu	0.25	3	2011	82	21	103	96
	0.5	5.7	2538	145	36	181	94
	1	10.2	3220	260	65	325	92
	2	14.7	3993	374	94	468	91
	10	42.5	5824	998	250	1248	83
	100	98.5	16149	2314	578	2892	86

Although the total lead loads are significantly higher under the scenario of Reach 9 receiving direct rain, the concentrations and load reductions are less than when the reach receives no rain. This is a result of the higher flows expected with rain falling over a larger area. Under the scenario where Reach 9 does not receive any rain the load from Reach 24 is simply transported downstream with no additional loads being added from the local watershed.

Table 4 summarizes the TMDLs for Reach 9 when rain falls over Reaches 9, 13, 23, and 24. Rainfall on Reach 9 results in higher flows and decreased load reductions necessary for total and dissolved copper. However, the increased flows do not result in a lowering of the reduction needed for total lead. The conclusion drawn from this is that the watershed of Reach 9 is contributing a total lead load to Turkey Creek.

Table 4. TMDLs for Reach 9 with rainfall over Reaches 9, 16, 23, and 24

Metal	Return Interval (yr)	Avg Flow (cfs)	Existing load (g/day)	LA (g/day)	MOS (g/day)	TMDL (g/day)	% Reduction
Total Pb	0.25	13.5	892	395	99	494	56
	0.5	22.6	3042	662	165	827	78
	1	35.5	8947	1039	260	1299	88
	2	47.8	18130	1400	350	1749	92
	10	122.5	54256	3587	897	4484	93
	100	269.6	110172	7894	1973	9867	93
Cu (t)	0.25	13.5	7796	13176	3294	16470	0
	0.5	22.6	17033	22058	5514	27572	0
	1	35.5	36311	34648	8662	43310	5
	2	47.8	63747	46653	11663	58316	27
	10	122.5	160071	119560	29890	149450	25
	100	269.6	282356	263130	65782	328912	7

Cu (d)	0.25	13.5	2643	369	92	461	86
	0.5	22.6	3373	573	143	717	83
	1	35.5	3388	901	225	1126	73
	2	47.8	3275	1213	303	1516	63
	10	122.5	8693	2869	717	3587	67
	100	269.6	37604	6315	1579	7894	83

To evaluate the effect of completely removing the tailings piles from the system, the localized area rain results were repeated with the separate contribution from tailings removed. This results in a major reduction in the concentrations of Cu(t) and Cu(d), but the reduction amount is much less for Pb(t). The reduction in Cu(t) is largely due to the removal of the Cu(d) load from the tailings. Note that the Cu(d) load from the tailings may be overestimated due to limitations of the model. It was found from the data analysis and model calibration that much of the total suspended solids (TSS) and associated particulate lead and copper in Reach 24 apparently came from the upstream watershed. While the Golden Belt and Golden Turkey mines are identified sources, there are probably many other unidentified sources in the watershed that contribute significant amounts of particulate lead and copper. Further monitoring and investigation are needed to identify these sources.

CRITICAL CONDITIONS

Critical conditions refer to the set of circumstances that lead to loading to the waterbody sufficient enough to cause exceedances. Critical conditions for loading to Turkey Creek are directly related to storm induced runoff. Sustained, steady baseflow conditions resulting from spring snowmelt (when it occurs) do not lead to impairments. The distinction between these two events is evident when Labat-Anderson, Inc. (LAI) and ADEQ TMDL results are compared to the Prescott Mining Project (PMP) results.

The PMP study was conducted during sustained flow in Turkey Creek related to snowmelt with no precipitation falling in the watershed during the two weeks prior to sampling. No elevated metal concentrations were measured in the PMP study. In contrast, the ADEQ TMDL study sampled during summer and winter storm induced runoff events that lead to increased stream flow and sediment transport. The LAI study collected runoff samples from the tailings at the Golden Belt and Turkey Belt mines to determine impacts to Turkey Creek. During these events elevated concentrations of copper and lead were observed.

IMPLEMENTATION

The United States Forest Service (USFS), as current owner of the mine properties, is developing a plan for implementation of remedial actions at the Golden Belt, Golden Turkey and French Lily mines which is reported to be at the 90% development stage (USFS, 2004). The French Lily mine is nearby in an adjacent watershed. The USFS plan for the two mines on Turkey Creek calls for among other things, control of local surface flow by incorporating run-on/runoff diversion structures around the mines, regrading and relocating of tailings to improve stability, and construction of protective barriers (gabions) at critical points to reduce erosion of the piles by the stream. The foot of each tailings pile is to be moved back from the flood plain to the level consistent with a projected 100 year flood event to reduce scour during flood events. All tailings piles are to be regraded to a 3:1 slope, capped, and revegetated to aid in control of surface erosion. The activities cited are expected to significantly reduce the impact of these mine wastes on the Turkey Creek watershed. Implementation of the USFS plan is dependent upon funding approval by the U.S. Congress.

PUBLIC PARTICIPATION

Stakeholder and public participation for the Turkey Creek TMDL Project has been encouraged and received throughout the development of the TMDL. ADEQ has extended a request for input from the watershed groups, local residents, governmental agencies, and other interested parties related to their opinions and suggestions regarding the TMDL study and findings, current and future implementation plans, model selection and use, data collection, and the level of involvement that they might contribute to the decision process.

In addition to informal meetings in the field with stakeholders, three formal public meetings were conducted during the Turkey Creek TMDL project. The public meetings were arranged with the assistance of the local stakeholders and watershed groups. The first was held on March 23, 2004 at the Bumble Bee Ranch, near Bumble Bee, Arizona, with approximately twenty attendees representing local ranchers and landowners, residents, and miners, in addition to staff from USFS, ADEQ and PBS&J, the ADEQ modeling contractor. Discussion at this meeting included introduction of the TMDL process to the attendees; a preliminary reporting on the ADEQ investigation and the modeling status at that time; and the announcement by USFS outlining anticipated remediation plans for three of the larger mines in the area. Notice regarding guidance available to parties interested in pursuing development of other remediation projects, as well as the availability of federal (319) grants for that purpose, was provided. A question and answer period followed. The second meeting at Bumble Bee Ranch occurred on September 9, 2004. The draft TMDL report and the associated model were the main topics of discussion.

The draft TMDL report was made available for a 30-day public comment period beginning on April 13, 2006 and ending on May 12, 2006. Public notice of the availability of the draft document was made via a posting in a newspaper of general circulation -The Prescott Daily Courier; e-mail notifications; phone calls; and web page postings. The only comments received were from the Arizona Game and Fish Department (AGFD) and are summarized below with the Department's responses.

Comment (paraphrased)- The draft report recognizes that recreation and grazing uses may contribute to increased soil erosion. AGFD recommends that livestock and off-highway vehicles be excluded from the project area to minimize soil erosion.

Comment (paraphrased)- The report recommends that upon completion of the project the capping material is overseeded with appropriate vegetative species to establish an erosion-resistant ground surface. AGFD recommends that native vegetative seed species be used for the appropriate vegetative ground cover.

Response- ADEQ agrees that access to the site after remediation efforts are completed be restricted to minimize soil erosion of the capping material. The Department also agrees that any revegetation efforts should use native species. ADEQ has forwarded the AGFD comments to USFS so that they are aware of the concerns raised and can address them during the planning and construction phases of the project. Although the TMDL contains implementation guidance, USFS is responsible for the remediation efforts being proposed.

After completion of the 45-day Arizona Administrative Register review period, this report will be submitted to the EPA for final approval.

4. Name and address of agency personnel with whom persons may communicate:

Name:	Jason Sutter, TMDL Unit Supervisor
Address:	Arizona Department of Environmental Quality 1110 W. Washington St. Phoenix, AZ 85007
Telephone:	(602) 771-4468 (in Arizona: (800) 234-5677; ask for seven-digit extension)
E-mail:	sutter.jason@azdeq.gov
Fax:	(602) 771-4528

Copies of the revised draft TMDL may be obtained from the Department by contacting the numbers above. The draft TMDL may also be downloaded from the Department's web site at: http://www.azdeq.gov/environ/water/assessment/status.html

5. The time during which the agency will accept written comments and the time and place where oral comments may be made:

There is no public comment period associated with this Notice; the Department previously provided an opportunity for comment on the proposed TMDLs.

NOTICE OF PUBLIC INFORMATION

DEPARTMENT OF ENVIRONMENTAL QUALITY

[M06-287]

1. Name of the Agency: Arizona Department of Environmental Quality
Title and its heading: 49, The Environment
Chapter and its heading: 2, Water Quality Control
Article and its heading: 6, Pesticide Contamination Prevention

2. The public information relating to the listed statute:

In accordance with A.R.S. § 49-305, the Arizona Department of Environmental Quality (Department or ADEQ) is required to annually develop and maintain a list of agricultural use pesticide active ingredients that have the potential to pollute groundwater. The Director shall publish the proposed Groundwater Protection List (GWPL) in the *Arizona Administrative Register* and accept within a 30-day period, written comments from the public. On April 28, 2006, the Department published the draft 2006 GWPL in the *Arizona Administrative Register, Vol. 12, Issue 17, p. 1426 -1429,* and received public comment. Based on the review and acceptance of a public request, the Department has decided to delete 10 pesticide active ingredients and their degradation products from the GWPL. These active ingredients no longer pose a threat to groundwater quality, based on the results of evaluation under R18-6-103(2).

3. The final 2006 groundwater protection list

Pursuant to A.A.C. R18-6-301, the Department is publishing the final 2006 GWPL. The draft 2006 GWPL published in April 2006 included 88 active ingredients which are hereby modified to exclude the following 10 active ingredients.

2,4-DP-P
Acetamiprid

Chloropicrin
Clethodion
Diflufenzopyr
Fluvalinate
Kresoxim-Methyl
Pyraflufen-Ethyl
Thiacloprid
Trakoxydim
With this publication, the new GWPL becomes effective on December 1, 2006.

Final 2006 Groundwater Protection List
Bold – Ingredients that have been found in groundwater in Arizona

	CAS Number	Chemical Name
	1928-43-4	**2,4-D 2-Ethylhexyl Ester**
	94-75-7	**2,4-D Acid**
		2,4-D Alkanol - Amine Salts of Ethanol and Isopropanol
	137335-70-7	**2,4-D Alkyl*Amine**
	1929-73-3	**2,4-D Butoxyethyl Ester**
	94-80-4	**2,4-D Butyl Ester**
	2212-54-6	**2,4-D DDA (Dodecyclamine Salt)**
	5742-19-8	**2,4-D Diethanolamine Salt**
	20940-37-8	**2,4-D Diethylamine Salt**
	2008-39-1	**2,4-D Dimethylamine Salt**
	533-23-3	**2,4-D Ethylhexyl Ester**
	1713-15-1	**2,4-D Isobutyl Ester**
	53404-37-8	**2,4-D Isooctyl (2-ethyl-4-methylpentyl)**
	5742-17-6	**2,4-D Isopropylamine Salt**
	25168-26-7	**2,4-D Isooctyl Ester**
	94-11-1	**2,4-D Isopropyl Ester of**
	2212-59-1	**2,4-D N-Oleyl-1,3-Propylenediamine Salt**
	28685-18-9	**2,4-D TDA (Tetradecyclamine)**
	2646-78-8	**2,4-D Triethylamine Salt**
	32341-80-3	**2,4-D Trisopropanolamine Salt**
	135158-54-2	Acibenzolar-S-Methyl
	1912-24-9	**Atrazine**
	131860-33-8	Azoxystrobin
	314-40-9	**Bromacil**
	53404-19-6	**Bromacil, Lithium Salt**
	63-25-2	**Carbaryl**
	128639-02-1	Carfentrazone-Ethyl

	1702-17-6	Clopyralid
	420-04-2	Cyanamide
	52918-63-5	Deltamethrin
	13684-56-5	Desmedipham
	1918-00-9	**Dicamba**
	25059-78-3	**Dicamba, DEA Salt**
	104040-79-1	**Dicamba, DGA Salt**
	2300-66-5	**Dicamba, DMA Salt**
	10007-85-9	**Dicamba, Potassium Salt**
	1982-69-0	**Dicamba, Sodium Salt**
	110488-70-5	Dimethomorph
	165252-70-0	Dinotefuran
	330-54-1	**Diuron**
	144-21-8	DSMA (Disodium Methanearsonate)
	137512-74-4	Emamectin Benzoate
	115-29-7	**Endosulfan**
	158067-0	Flonicamid
	142459-58-3	Flufenacet (Thiafluamide)
	66332-96-5	Flutolanil
	77182-82-2	Glufosinate-Ammonium
	112226-61-6	Halofenozide
	100784-20-1	Halosulfuron-Methyl
	114311-32-9	Imazamox
	104098-48-8	Imazapic
	81335-77-5	Imazethapyr
	101917-66-2	Imazethapyr, Ammonium Salt
	138261-41-3	Imidacloprid
	330-55-2	**Linuron**
	128-58-3	MAA (Methanearsonic Acid)
	12427-38-2	Maneb
	16484-77-8	Mecoprop-P (MCPP-P)
	70630-17-0	Mefenoxam
	208465-21-8	Mesosulfuron-Methyl
	16752-77-5	**Methomyl**
	161050-58-4	Methoxyfenozide
	21087-64-9	**Metribuzin**
	2163-80-6	Monosodium Methanearsonate (MSMA)

	111991-09-04	Nicosulfuron
	23135-22-0	**Oxamyl**
	1610-78-0	**Prometon**
	7287-19-6	**Prometryn**
	94125-34-5	Prosulfuron
	123312-89-0	Pymetrozine
	123343-16-8	Pyrithiobac Sodium
	84087-01-4	Quinclorac
	81591-81-3	Sulfosate
	112410-23-8	Tebufenozide
	153719-23-4	Thiamethoxam
	117718-60-2	Thiazopyr
	199119-58-9	Trifloxysulfuron-Sodium
	95266-40-3	Trinexapac-Ethyl

4. The name and address of agency personnel with whom persons may communicate:

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The Groundwater Protection List can be downloaded from the Department web site at: http://www.azdeq.gov/environ/water/assessment/pesticide.html